Access DB# _____

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: **BRIAN QUANG LE** Examiner # : **79178** Date: **12/02/03**

Art Unit: **2623** Phone Number 30 **5-5083** Serial Number: **09/ 788,037**

Mail Box and Bldg/Room Location: **JHL 4B40** Results Format Preferred (circle): **PAPER** DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.
****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract. *Handwritten text,*

Title of Invention: **HOLISTIC ANALYTICAL RECOGNITION of**

Inventors (please provide full names):
Alexander Filatov, Igor Kil & Armen Seregin

Earliest Priority Filing Date: **02/ 16/ 2001**

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please see attachments for search instructions

****

USPTO

Scientific & Technical Information Center

TO: Brian Le
Location: PK1 4B40
Art Unit : 2623
Friday, December 19, 2003

Case Serial Number: 09/788032

From: Vamshi Kalakuntla
Location: EIC 2600
PK2-3C03
Phone: 306-0254

Vamshi.kalakuntla@uspto.gov

Search Notes

Dear Brian Le;

Attached please find the results of your search request 09/788032.
I used the search strategy I emailed to you to edit, not hearing from you I proceeded.
I searched the standard Dialog files, IBM TDBs, SiteSeer, IEEE, IBM TDB, the wayback machine, and the internet.

If you would like a re-focus please let me know.
Please feel free to contact me if you have questions or concerns. Thank you and have a great day.

Please take a moment and fill out the attached feedback form. Thank you.

Park, JAEHWA,

sira
Search and Information
Resources Administration

? ds

Set	Items	Description
S1	153227	(IMAGE? OR HANDWRIT? OR HAND()WRIT?) AND (RECOGNI? OR IDENTIF? OR DETERMIN? OR ANALY? OR PARSE OR PARSING OR TOKENI?)
S2	405454	(WORD? ? OR CHARACTER? ? OR ALPHANUMERIC? OR STRING? ?(5N)-TEXT??? OR METASTROKE? ? OR STROKE? ?)
S3	81627	(RECOGNI? OR IDENTIF? OR DETERMIN? OR ANALY? OR PARSE OR PARSING OR TOKENI?) AND S2
S4	25778	(PROTOTYPE OR REFERENCE OR MODEL OR STANDARD) AND S2
S5	11976	(MATCH? OR COMPAR? OR DIFFERENTIAT? OR CORRELAT? OR RELAT?-)(5N)S3·
S6	274662	(DICTIONAR? OR LEXICON? OR THESAUR? OR GLOSSAR? OR CATALOG? OR LIST OR LISTS OR SELECTION?)
S7	29753	(CONFIDENCE OR SIMILAR? OR LIKELIHOOD OR LIKELINESS OR PROBABILIT? OR CHANCE? ? OR RANK OR RANKING OR WEIGHT? OR THRESHOLD? ?) AND S2
S8	5096	(HOLISTIC? OR WHOLE OR SUM OR TOTAL?)(10N)S2
S9	3569433	(ANSWER? ? OR RESULT? OR OUTPUT? ? OR OUTCOME? ? OR PRODUCT)
S10	5260988	(SEGMENT? OR PART? ? OR PIECE? ? OR SECTION? ? OR TOKEN? ?)
S11	0	S1(S)S4(S)S5(S)S6(S)S7(S)S8(S)S9(S)S10
S12	1479	S8(15N)S3
S13	632	IC=G06K-009/72 AND S1
S14	591	S13 AND S3
S15	305	S14 AND S6
S16	9	S15 AND S8
S17	9	IDPAT (sorted in duplicate/non-duplicate order)
S18	9	IDPAT (primary/non-duplicate records only)
S19	809	S3 AND S5 AND S4 AND S6
S20	8	S19 AND S7 AND S8 AND S9
S21	8	IDPAT (sorted in duplicate/non-duplicate order)
S22	8	IDPAT (primary/non-duplicate records only)
S23	1	(HOLISTIC AND ANALYTIC?) AND S2
S24	11977	S3(2N)S9
S25	3887	S1 AND S24
S26	1009	S25 AND S6
S27	246	S26 AND S4
S28	71	S27 AND S7
S29	27	S28 AND S5
S30	25	S29 NOT (S22 OR S18)
S31	25	IDPAT (sorted in duplicate/non-duplicate order)
S32	23	IDPAT (primary/non-duplicate records only)
S33	18	S32 NOT PD=20010216:20031218

014885676   **Image available**
WPI Acc No: 2002-706382/200276
XRPX Acc No: N02-556948
   Handwritten   character   recognition **apparatus used in computer system
   for commercial applications, generates** holistic **and** analytic **answer**
   list **using** character **string** recognized **in** image **and string**
   segmentation list
Patent Assignee: PARASCRIPT LLC (PARA-N); FILATOV A (FILA-I); KIL I
   (KILI-I); SEREGIN A (SERE-I)
Inventor: FILATOV A; KIL I; SEREGIN A
Number of Countries: 098 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020114523	A1	20020822	US 2001788032	A	20010216	200276	B
WO 200267189	A2	20020829	WO 2002US53	A	20020103	200276	
EP 1362322	A2	20031119	EP 2002720749	A	20020103	200377	
			WO 2002US53	A	20020103		

Priority Applications (No Type Date): US 2001788032 A 20010216
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020114523	A1		15	G06K-009/72	
WO 200267189	A2	E		G06K-009/68	

   Designated States (National): AE AG AL AM AU AZ BA BB BG BR BY BZ CA CH
   CN CO CR CU DM DZ EC ES GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
   KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU
   SD SE SG SI SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
EP 1362322   A2 E   G06K-009/68   Based on patent WO 200267189
   Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
   LI LT LU LV MC MK NL PT RO SE SI TR

   Handwritten character   recognition **apparatus used in computer system
   for commercial applications, generates** holistic **and** analytic **answer**
   list **using** character **string** recognized **in** image **and string**
   segmentation list

Abstract (Basic):
   ....   A **holistic   recognition** unit (102) **recognizes** a string of
   characters in the **image** and generates a **holistic** answer **list**
   (106) with a confidence value and a string segmentation **list** (103).
   An **analytic   recognition** unit (104) **recognizes** the string of
   characters in the **image** , based on segmentation **list** to generate an
   analytic answer **list** (108). An answer module (110) **determines** the
   best **recognition** answer from the answer **lists** .
   ...   1) Cursive text **recognition** method; and...

   ...2) **Handwritten** text **recognition** method...

   ...For **recognizing** · **handwritten   characters** in text loaded into
   computer system, used commercial applications such as mail sorting,
   bank check...

   ...By segmenting the string of **characters** in the **image** , the accuracy of

recognizing the **characters** is enhanced...

...The figure shows the **handwritten** text **recognition** system...

...Holistic **recognition** unit (102...

...String segmentation **list** (103...

... **Analytic** **recognition** unit (104...
...Holistic answer **list** (106...

... **Analytic** answer **list** (108
Title Terms: **HANDWRITING** ;
...International Patent Class (Main): **G06K-009/72**

18/3,K/2   (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

013019564   **Image available**
WPI Acc No: 2000-191415/200017
XRPX Acc No: N00-142550
   Handwritten   character **processing unit for** character   recognition
   apparatus, outputs index value representing similarity of handwritten
   character **, with** character **stored in database**
Patent Assignee: CASIO COMPUTER CO LTD (CASK)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind Date   Week
JP 2000036008 A   20000202 JP 98203987   A   1998071   200017 B

Priority Applications (No Type Date): JP 98203987 A 19980717
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 2000036008 A   14 G06K-009/72

   Handwritten   character **processing unit for** character   recognition
   apparatus, outputs index value representing similarity of handwritten
   character **, with** character **stored in database**
...Abstract (Basic): NOVELTY - Each **handwritten**   **character** of a
   character row, are compared with the stored data and an index
   representing the similarity of the **handwritten**   **character** with the
   prestored **character** , is output. The **sum** of all the indexes
   corresponding the **character** row, is **determined** , and a high index-
   sum value indicates mis-match of the **character** row with the **word**
   extracted from the database. DETAILED DESCRIPTION - A **character**
   recognition   **dictionary** and a **word**   **dictionary** are stored in a
   database...

...USE - For **character**   **recognition** apparatus...

...ADVANTAGE - The **character**   **recognition** rate is improved irrespective
   of the type of **character** such as a numeric **character** , symbol, etc.
   The similarity between **handwritten**   **character** row and **word**
   extracted from the database, is distinguished easily, thus enabling
   high speed operation. DESCRIPTION OF DRAWING(S) - The figure shows the
   block diagram of **handwritten**   **character** processing unit...
Title Terms: **HANDWRITING** ;

International Patent Class (Main): G06K-009/72

18/3,K/3   (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

011462402   **Image available**
WPI Acc No: 1997-440309/199741
XRPX Acc No: N97-366216
   Online character   recognition **method for** handwriting   character -
   involves outputting standard character **chosen from** dictionary , **which**
   is similar to group in characteristic that shows total **shape of**
   character **notes, according to computed similarity of** character ·**notes**
Patent Assignee: MITSUBISHI ELECTRIC KK (MITQ); MITSUBISHI ELECTRIC CORP
   (MITQ); MITSUBISHI DENKI KK (MITQ)
Number of Countries: 004 Number of Patents: 006
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 9198466   A   19970731 JP 964760   A   19960116 199741 B
TW 315446   A   19970911 TW 96111604   A   19960923 199804
KR 97059977   A   19970812 KR 9653419   A   19961112 199838
KR 236247   B1   19991215 KR 9653419   A   19961112 200112
JP 3360513   B2   20021224 JP 964760   A   19960116 200304
CN 1155129   A   19970723 CN 96121613   A   19961113 200374

Priority Applications (No Type Date): JP 964760 A 19960116
Patent Details:
Patent No   Kind Lan Pg   Main IPC   Filing Notes
JP 9198466   A   27 G06K-009/62
TW 315446   A.   G06K-009/72
KR 97059977   A   G06K-009/62
KR 236247   B1   G06K-009/62
JP 3360513   B2   26 G06K-009/62   Previous Publ. patent JP 9198466
CN 1155129   A   G06K-009/62

   Online character   recognition **method for** handwriting   character -
   ...

...**involves outputting standard** character **chosen from** dictionary , **which**
   is similar to group in characteristic that shows total **shape of**
   character **notes, according to computed similarity of** character **notes**

...Abstract (Basic): The method involves inputting writing information
   associated with the writing operation of a **character** . The
   characteristic which shows the **whole** shape **character** notes is
   extracted from the writing information. A standard **character** similar
   to a group in the characteristic which shows the **total   character**
   notes shape is chosen from a **dictionary** . A first **stroke**
   characteristic which shows the characteristic of a **stroke** that
   includes the **character** notes is extracted from the writing data...

...The **strokes** of the chosen standard **character** and first **stroke**
   characteristic are matched in consideration in the order of making
   strokes in writing the Chinese **character** of the **character** notes.
   The similarity for the **character** notes of the chosen standard
   character is then computed. The chosen standard **character** is then
   output according to the computed similarity of the **character** notes...

...ADVANTAGE - **Recognises   handwriting   character** with high precision.

Reduces number of standard **characters** which orders matching
recognition of writing **strokes** of Chinese **character** . Performs
highly precise **recognition** at high speed. Reduces number of standard
characters which do number matching **recognition** of drawings...
Title Terms: **CHARACTER ;**
...International Patent Class (Main): **G06K-009/72**

 18/3,K/4   (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

010496609   **Image available**
WPI Acc No: 1995-397929/199551
XRPX Acc No: N95-288694
  Form forecast synthesis type text recognition **method - by selecting**
  possible initial text with best total **distance value as** list **of text**
  character **corresponding to** image **part**
Patent Assignee: XEROX CORP (XERO)
Inventor: BOBROW D G; KAPLAN R M
Number of Countries: 002 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 7271915	A	19951020	JP 9563073	A	19950322	199551	B
US 5524066	A	19960604	US 94220861	A	19940331	199628	

Priority Applications (No Type Date): US 94220861 A 19940331
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 7271915	A		19	G06K-009/62	
US 5524066	A		20	G06K-009/72	

  Form forecast synthesis type text recognition **method...**
...**by selecting possible initial text with best** total **distance value as**
  list **of text** character **corresponding to** image **part**

...Abstract (Basic): The **recognition** method involves generation of bit
  map in the present part of the **image** . The initial lower outline is
  then acquired. A comparison value between the **image** part and the
  possible text indicating at least initial lower outline is obtained, by
  comparing...

...The **list** of initial text is updated on the basis of comparison value.
  Then, a possible initial...

...part of the text is reached. Finally, the best one of the initial text
  is **identified** as the text **word** .
      . . .

...ADVANTAGE - Adds robustness. Performs separate **analysis** of part shape
  profile and lower shape profile
...Abstract (Equivalent): A method for converting an **image** portion to at
  least one text **word** comprising the steps of...

...a) generating a bitmap of a current portion of an **image** , said bitmap
  including a leftmost pixel of the current **image** portion...

...b) selecting a **list** of current possible text prefixes, the **list** of
  current possible text prefixes including at least one current possible
  text prefix, from a **dictionary** of possible text **words** and a **list**

of possible text prefixes...

...upper prefix contour and a lower prefix contour for each current
   possible prefix of the **list** of current possible text prefixes...

...d) **determining** a comparison value between the current **image** portion
   and each at least one current possible text prefix based solely on a
   comparison between the bitmap of the current **image** portion and the
   upper and lower prefix contours, said comparison value including a
   distance measure...

...the quality of the fit and coordinate values of the bit map of the
   current **image** portion to which the upper and lower pixel contours of
   each possible current text prefix...

...e) updating said **list** of possible text prefixes based on the
   comparison value for each current possible text prefix, said updated
   list including at least one extended prefix selected from the
   dictionary ;
       . . . .

...f) updating the **list** of current possible text prefixes from the
   updated **list** of possible text prefixes based on the distance measure
   corresponding to each prefix on the updated **list** of possible text
   prefixes...

...g) repeating steps c-f until an end of the current **image** portion has
   been reached; and...

...h) **identifying** a best one of the possible text prefixes as the text
   word corresponding to the current **image** portion
...Title Terms: **RECOGNISE** ;
...International Patent Class (Main): **G06K-009/72**

 18/3,K/5   (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO
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07368381   **Image available**
HANDWRITING CHARACTER INFORMATION INPUT DEVICE AND METHOD

PUB. NO.:   2002-236878 [JP 2002236878 A]
PUBLISHED: August 23, 2002 (20020823)
INVENTOR(s):   NAKAJIMA KENJI
               IWAYAMA NAOMI
               IWAI HISAE
APPLICANT(s): FUJITSU LTD
APPL. NO.:   2001-032722 [JP 20011032722]
FILED: February 08, 2001 (20010208)

HANDWRITING CHARACTER INFORMATION INPUT DEVICE AND METHOD

INTL CLASS: **G06K-009/72** ; G06K-009/03; G06K-009/62

                          ABSTRACT
PROBLEM TO BE SOLVED: To provide a **handwriting character** information
input device and a method capable of obtaining **recognized characters**
 intended by a user by easier operation.
SOLUTION: In a **handwriting   character** information input method,

handwriting characters are inputted and **recognized** , the **whole** or a part of the **recognized** characters are used as a retrieval **character** string in order from the forefront, a **dictionary** whose registered data has a hierarchical structure is successively inquired from data of a superordinate hierarchy, a **recognized** **character** string coincident with the retrieval 1character string is extracted, postprocessing is executed on **characters** unincluded in the retrieval **character** string among the **recognized** **characters** , a postprocessing-executed result and the **recognized** **character** string are separately displayed, and the postprocessing-executed result can be corrected. The whole hierarchies are successively retrieved from the superordinate hierarchy when a special **character** is not found by inquiring of whether or not the special **character** meaning a special hierarchy is included in the end of the retrieval **character** string, and only a hierarchy meant by the special **character** is used as a retrieving object when the special **character** is found.

18/3,K/6 **(Item 6 from file: 347)**

06948259 **Image available**
DEVICE AND METHOD FOR **WORD** ROUGH CLASSIFICATION, AND RECORDING MEDIUM WITH RECORDED CONTROL PROGRAM THEREOF

PUB. NO.:   2001-175811 [JP 2001175811 A]
PUBLISHED: June 29, 2001 (20010629)
INVENTOR(s):   DIDIER·GUILLEVIC
               YAMADA TAKATSUGU
APPLICANT(s): NEC CORP
APPL. NO.:   11-363744 [JP 99363744]
FILED: December 22, 1999 (19991222)

DEVICE AND METHOD FOR **WORD** ROUGH CLASSIFICATION, AND RECORDING MEDIUM WITH RECORDED CONTROL PROGRAM THEREOF

INTL CLASS: G06K-009/72

ABSTRACT
PROBLEM TO BE SOLVED: To provide a **word** rough classifying device which can generate features regarding **words** stored in a vocabulary storage part from the **character** codes of the respective **words** and efficiently select **words** .

SOLUTION: A candidate **character** **selection** part 1 detects an area which seems to be a **character** from a **word** **image** and a **character** **recognition** part 2 converts a candidate **character** generated by a candidate **character** **selection** part 1 into a **character** code. A **character** number estimation part 3 estimates the number of **characters** of the **whole** **word** **image** and the number of **characters** in the area between candidate **characters** , and a **word** description part 4 generates a **word** description corresponding to a state transition graph from the **recognition** result of the candidate **character** and the estimated number of **characters** between the candidate **characters** . A vocabulary **selection** part 5 selects a vocabulary which can be compared with the **word** description from the vocabulary stored in the vocabulary storage part, 6.

Consequently, the **word** rough classification part can be constituted, which can operate fast and roughly classify **words** with high precision.

18/3,K/7   (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO
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06220179   **Image available**
 WORD   RECOGNIZING DEVICE

PUB. NO.:   11-161740 [JP 11161740 A]
PUBLISHED: June 18, 1999 (19990618)
INVENTOR(s):   HOTSUTA YOSHINOBU
               NAOI SATOSHI
APPLICANT(s): FUJITSU LTD
APPL. NO.:   09-330496 [JP 97330496]
FILED: December 01, 1997 (19971201)

 WORD   RECOGNIZING DEVICE

INTL CLASS: **G06K-009/72** ; G06K-009/36

ABSTRACT
PROBLEM TO BE SOLVED: To provide a **word   recognizing** device in which **recognizing** precision can be made high by easing the constraint of an entry condition especially in a **handwritten character** in a **character recognizing** device.
SOLUTION: A **word recognizing** device corrects a picture position or a center of gravity position in a **word** area, and operates **word** unit normalization. Collation with a **word** feature **dictionary** is operated, scores are applied to **word** candidates, and a **recognized** result is obtained in the order of the **word** candidate whose score is high. Also, the **recognized** result is obtained when the **total** scores of the **word** candidate column is the highest. Moreover, the **word** feature **dictionary** is prepared from a **character** feature **dictionary** .

18/3,K/8   (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO
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04979321   **Image available**
 CHARACTER   RECOGNIZING DEVICE AND METHOD THEREOF

PUB. NO.:   07-271921 [JP 7271921 A]
PUBLISHED: October 20, 1995 (19951020)
INVENTOR(s):   EMURA SATOSHI
               NAKAO ICHIRO
               TAKENOUCHI MARIKO
               TAKAKURA MINORU
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD [000582] (A Japanese Company
               or Corporation), JP (Japan)
APPL. NO.:   06-057362 [JP 9457362]
FILED: March 28, 1994 (19940328)

CHARACTER RECOGNIZING DEVICE AND METHOD THEREOF

INTL CLASS: **G06K-009/72** ; G06K-009/03

ABSTRACT

PURPOSE: To provide a **character** **recognizing** device which has the learning capability for **recognition** of **characters** by providing a **word** deciding means which calculates the **word** evaluation value in a prescribed procedure based on the **word** appearance frequency obtained by a **word** retrieving means and decides a correct **word** based on the calculated **word** evaluation value...

...CONSTITUTION: A **character** feature extracting means 101 segments a **character** string and extracts a feature pattern showing the **character** features out of the **image** of each segmented **character**. A **character** **recognizing** means 103 obtains plural **recognition** candidate **characters** based on the difference between the extracted feature pattern and each of **recognition** patterns stored in a **character** **recognition** **dictionary** 102. A **word** retrieving means 105 obtains the emerging frequency of a selected **word** when this **word** is registered in **word** **dictionary** 104. A **word** evaluating means 106 calculates the **word** evaluation value based on the **sum** of **recognition** evaluation value of the **recognition** candidate **characters** and also based on the function that is previously decided by the **word** emerging frequency. Then a **word** deciding means 107 chooses a **word** of the highest evaluation value based on the calculated **word** evaluation value and outputs this **word**.

18/3,K/9   (Item 9 from file: 347)
DIALOG(R)File 347:JAPIO
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02526784   **Image available**
METHOD FOR CORRECTING **RECOGNIZED** RESULT IN **CHARACTER** **RECOGNIZING** DEVICE

METHOD FOR CORRECTING **RECOGNIZED** RESULT IN **CHARACTER** **RECOGNIZING** DEVICE

INTL CLASS: G06K-009/03; **G06K-009/72**
...JAPIO KEYWORD: **Word** Processors)

ABSTRACT

PURPOSE: To make **recognition** processing highly efficient by checking the spelling of a **recognized** **character** string in each **word** and displaying the **whole** **word** **image** including rejectable **characters** checked at its spelling on a display part...

...CONSTITUTION: **Words** are sequentially read out from a **word** memory 11

to a spelling checking part 16 in a language processing part 15 to check the spelling of the read **words** in the checking part 16. The spelling check processing is executed by deciding whether the **words** read out from the **word** memory 11 completely coincide with a alphabetical **words** accumulated in a **word** **dictionary** 17 previously storing prescribed alphabetical **words** or not. The processed result, i.e. **recognized** result, in the spelling checking part 16 is stored in an output memory 21 of...

...CRT e.g. and sent to an external apparatus such as a translator or a **word** processor. Thus, the **recognized** result can be efficiently corrected.
?

22/3,K/1   (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

011462402   **Image available**
WPI Acc No: 1997-440309/199741
XRPX Acc No: N97-366216
   Online character   recognition **method for handwriting** character -
   involves outputting standard   character **chosen from** dictionary ,
   which is similar **to group in characteristic that shows** total **shape of**
   character **notes, according to computed** similarity **of** character
   notes
Patent Assignee: MITSUBISHI ELECTRIC KK (MITQ); MITSUBISHI ELECTRIC CORP
   (MITQ); MITSUBISHI DENKI KK (MITQ)
Number of Countries: 004 Number of Patents: 006
Patent Family:
Patent No   Kind Date   Applicat No   Kind   Date   Week
JP 9198466   A   19970731 JP 964760   A   19960116 199741 B
TW 315446   A   19970911 TW 96111604   A   19960923 199804
KR 97059977   A   19970812 KR 9653419   A   19961112 199838
KR 236247   B1   19991215 KR 9653419   A   19961112 200112
JP 3360513   B2   20021224 JP 964760   A   19960116 200304
CN 1155129   A   19970723 CN 96121613   A   19961113 200374

Priority Applications (No Type Date): JP 964760 A 19960116
Patent Details:
Patent No   Kind Lan Pg   Main IPC   Filing Notes
JP 9198466   A   27 G06K-009/62
TW 315446   A   G06K-009/72
KR 97059977   A   G06K-009/62
KR 236247   B1   G06K-009/62
JP 3360513   B2   26 G06K-009/62   Previous Publ. patent JP 9198466
CN 1155129   A   G06K-009/62

   Online character   recognition **method for handwriting** character - ...

   ...**involves outputting** standard   character **chosen from** dictionary ,
   which is similar ·**to group in characteristic that shows** total **shape of**
   character **notes, according to computed** similarity **of** character
   notes

   ...Abstract (Basic): The method involves inputting writing information
      associated with the writing operation of a **character** . The
      characteristic which shows the **whole** shape **character** notes is
      extracted from the writing information. A **standard** **character**
      similar to a group in the characteristic which shows the **total**
      character notes shape is chosen from a **dictionary** . A first **stroke**
      characteristic which shows the characteristic of a **stroke** that
      includes the **character** notes is extracted from the writing data...

   ...The **strokes** of the chosen **standard** **character** and first **stroke**
      characteristic are **matched** in consideration in the order of making
      strokes in writing the Chinese **character** of the **character** notes.
      The **similarity** for the **character** notes of the chosen **standard**
      character is then computed. The chosen **standard** **character** is then
      output according to the computed **similarity** of the **character** notes
      ...

   ...ADVANTAGE - **Recognises** handwriting **character** with high precision.

Reduces number of **standard** **characters** which orders **matching**
recognition of writing **strokes** of Chinese **character** . Performs
highly precise **recognition** at high speed. Reduces number of **standard**
characters which do number **matching** **recognition** of drawings...
Title Terms: **CHARACTER** ;

 22/3,K/2   **(Item 2 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

010800420   **Image available**
WPI Acc No: 1996-297373/199630
XRPX Acc No: N96-250240
  Character   recognition **method - by making** standard   character
 pattern that corresponds to object stroke **number, as** character
 recognition   result
Patent Assignee: TOSHIBA KK (TOKE)
Number of Countries: 001 Number of Patents: 002
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 8129609   A   19960521 JP 94268452   A   19941101 199630 B
JP 3444561   B2   20030908 JP 94268452   A   19941101 200366

Priority Applications (No Type Date): JP 94268452 A 19941101
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 8129609   A   18 G06K-009/62
JP 3444561   B2   19 G06K-009/62 Previous Publ. patent JP 8129609

   Character   recognition **method...**
...**by making** standard   character **pattern that corresponds to object**
 stroke **number, as** character   recognition   result

...Abstract (Basic): The method involves usage of a **stroke** **matching**
   unit (22) to **match** each **stroke** of the input **character** pattern and
   each **stroke** of the **standard** **character** pattern. The input
   character pattern is stored in an information input buffer (31). The
   standard **character** pattern is stored in a **character** **recognition**
   dictionary (41). The degree of difference of the **matched** **stroke**
   group is calculated by a degree calculation unit (26). An object
   judging unit (24) distinguishes the **stroke** whose degree of difference
   is below a **threshold** value...

...The **stroke** which deviates from the **standard** form is removed. An
   object **stroke** count unit (25) counts the number of **strokes** whose
   degree of difference lies below the 1threshold value to obtain the
   object **stroke** number. The **total** degree calculation unit adds all
   the different degrees which lie below the **threshold** value so as to
   obtain the total difference degrees. A **recognition** **result** operating
   unit (2e) makes the **standard** **character** pattern that corresponds to
   the object **stroke** number, as the **character** **recognition** **result** .
      ...
...ADVANTAGE - Enables **recognising** **character** pattern correctly thereby
   improving **character** **recognition** efficiency even if handwriting
   differs from **standard** .

Title Terms: **CHARACTER** ;

22/3,K/3   (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

06496456   **Image available**
CHARACTER   RECOGNITION DEVICE,   **DICTIONARY**   PREPARATION   METHOD AND
STORAGE MEDIUM

PUB. NO.:   2000-082113 [JP 2000082113 A]
PUBLISHED: March 21, 2000 (20000321)
INVENTOR(s):   MIYAZAWA TOSHIO
                OI TAKAKO
APPLICANT(s):   RICOH CO LTD
APPL. NO.:   10-268952 [JP 98268952]
FILED: September 07, 1998 (19980907)
PRIORITY: 10-201193 [JP 98201193], JP (Japan), July 01, 1998 (19980701)

CHARACTER   RECOGNITION DEVICE,   **DICTIONARY**   PREPARATION   METHOD AND
STORAGE MEDIUM

                        ABSTRACT
PROBLEM TO BE SOLVED: To improve **recognition** precision even with a
character of low quality by providing an extension **dictionary** , and
storing information based on the **character** pattern of a **character** which
cannot be correctly **recognized** by using a **standard** **dictionary** in the
extension **dictionary** .

SOLUTION: In   this   **character**   **recognition**   device, a **standard**
dictionary 5 stores **standard** information for **recognition** of a
specified **character** for every **character** in advance. A picture input
part 1 inputs a picture, and a preprocessing part 2 cuts out a **character**
from the inputted picture. A **recognition** processing part 3 **compares**
and collates information, based on the **character** pattern of an unknown
character with/to **standard** information of every **character** stored in
the **standard** **dictionary** 5 in advance and a **character** whose degree of
similarity is the largest is outputted as a **recognition** **result** . A
control part 4 controls a **whole** . Also, the **character** **recognition**
device is provided, with an extension **dictionary** 6 in addition to the
standard **dictionary** 5 and the extension **dictionary** 6 stores
information based on the **character** pattern of a **character** which can not
be correctly **recognized** by using the **standard** **dictionary** 5.
Especially, only information based on the **character** pattern of Kanji
(Chinese **character**) is stored.

22/3,K/4   (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

02646688   **Image available**
CHARACTER READER

PUB. NO.:   63-263588 [JP 63263588 A]
PUBLISHED: October 31, 1988 (19881031)
INVENTOR(s):   OGAWA NAOKI
                KOBAYASHI KEIJI
APPLICANT(s):   MITSUBISHI ELECTRIC CORP [000601] (A Japanese Company or
                Corporation), JP (Japan)

CHARACTER READER
...JAPIO CLASS: Input Output Units)

ABSTRACT

PURPOSE: To **recognize** and read many types of **character** forms at a high
speed and with a high accuracy by selecting a **recognizing** means in which
the sum of **similarity** is maximum and outputting the **recognizing** **result**
due to the selected **recognizing** means as a final **character** code...

...CONSTITUTION: A   **character**   segmenting means 4 segments an individual
character pattern from stored binary information. Next, a selecting means
11 selects a **recognizing** means 7, the **recognizing** means 7 **matches** a
segmented **character** pattern and the reference pattern of a **recognizing**
 dictionary 9, the **similarity** is calculated and the **character** code
corresponding to the **similarity** is thereby obtained. Next, the selecting
means 11 selects a **recognizing** means 8, the **recognizing** means 8
matches the **character** pattern and the **reference** pattern of the
recognizing   dictionary 10, the **similarity**   is calculated and the
character code corresponding to the **similarity** is obtained. Thereafter,
the selecting means 11 selects the **recognizing** means 7 or the
 recognizing means 8 in which the **sum** of the **similarity** is maximum and
the **character** code of the selected **recognizing** means is outputted.
Thus, various **character** forms can be read at a high speed and with a high
accuracy.

 22/3,K/5   (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO
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02335087   **Image available**
OPTICAL **CHARACTER** READER

OPTICAL **CHARACTER** READER
...JAPIO CLASS: Input **Output** Units)

ABSTRACT
PURPOSE: To facilitate the checking of misread **characters** by providing a
display color control means and changing the color of picture display of
the **result** of reading by using an evaluation value as a **character**
string...

...CONSTITUTION: A feature extracting means 2 **determines** the quantity of
feature by using video signals from a scanning means 1. Then, a

determining means 3 founds the **similarity** of **characters** constituting
the **character** sting by using the quantity of feature and the quantity of
feature of **reference** **characters** stored in a **recognition dictionary**
4 and founds the evaluation value of **whole** **character** string from the
similarity , and sends this evaluation value to a display color control
means 6. Then, according to whether the evaluation value is or not a
specified value or above, the read **character** string is displayed in color
A and color B respectively on the picture of a...

... value is less than the specified value, it is displayed in color B and
other **character** string is displayed in color A. In this case, it is
enough for an operator to check only **character** string in color B, and
finding of misread. **character** becomes easier **compared** with the case
where all **character** string on the picture is to be checked.

22/3,K/6   (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

01916987   **Image available**
CHARACTER RECOGNIZING DEVICE

PUB. NO.:   61-131087 [JP 61131087 A]
PUBLISHED: June 18, 1986 (19860618)
INVENTOR(s):   YOSHIMOTO KAZUO
APPLICANT(s):   SONY CORP [000218] (A Japanese Company or Corporation), JP
                 (Japan)
APPL. NO.:   59-252138 [JP 84252138]
FILED: November 29, 1984 (19841129)
JOURNAL: Section: P, Section No. 512, Vol. 10, No. 324, Pg. 78,
                 November 05, 1986 (19861105)

CHARACTER RECOGNIZING DEVICE
...JAPIO CLASS: Input **Output** Units)

ABSTRACT
... To reduce the load of software and to improve processing speed by
selecting a candidate **character** by a **correlator** which is a hardware and
then executing software processing...
...CONSTITUTION: A **character** image signal obtained from an image sensor 3
is normalized through a sampling circuit 7, a shading compensating circuit
9, an expanding circuit 13, etc. and stored in a **character** memory 14 as a
character pattern. A **correlator** 17 **compares** the **character** pattern
stored in the memory 14 with a **reference** **character** pattern stored in a
ROM 19 to obtain the correlated value. A comparator 21 discriminates the
obtained correlated value with **threshold** levels corresponding to
respective **reference** **character** patterns, selects a candidate **reference**
 character pattern from a candidate **character** memory 23 and obtains the
parameter of the **sum** of distances from four sides of an area including
the input **character** pattern vertically to the edge parts of the input
 character pattern from a parameter register 25. The parameter value is
compared with the parameter of the candidate **reference** **character**
 pattern which is obtained from a **dictionary** ROM 22 to **recognize** the
input **character** .

22/3,K/7   (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO
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01908681   **Image available**
SPEECH **WORD** PROCESSOR

SPEECH WORD PROCESSOR
...JAPIO CLASS: Input **Output** Units)
...JAPIO KEYWORD:Speech **Recognition** & Synthesis); R139 (INFORMATION
                PROCESSING...

... **Word** Processors)

                            ABSTRACT
PURPOSE: To improve the conversion efficiency to a proper **character**
string by adding a language adaptation to voice adaptation and
determining the display priority in case of displaying a display
character string already **matching** with a **dictionary** .

  . . .

... information or the like is extracted by a voice parameter extracting
part 2. A voice **recognition** part 4 **matches** the extracted time series
with a **reference** pattern stored in a voice **dictionary** 3 and stores a CV
syllable proposed sequence which is a **recognized** **result** in a syllable
lattice storage part 5 in accordance with proposed order. A conversional
object selecting part 6 combines syllables to be proposed to form a rough
character string finds out **similarity** based upon a distance from a
reference pattern and transfers the **similarity** to a **dictionary**
matching part 9. The **matching** part 9 retrieves a **word** **dictionary** 8
and stores proper **characters** in a storage part. A display selecting part
11 displays a **character** having the largest load **sum** between the voice
adaptation and language adaptation in priority. The language adaptation is
obtained from a format prime, **word** using frequency, etc.

 22/3,K/8   (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

01140876   **Image available**
OPTICAL **CHARACTER** READER

OPTICAL **CHARACTER** READER
...JAPIO CLASS: Input **Output** Units)

ABSTRACT

PURPOSE: To read **characters** of plural kinds of font optically, by switching a **dictionary** for read on a basis of **characters** on a preliminarily **determined** form...
...CONSTITUTION: A photoelectric converting part 1 converts photoelectrically **characters** on a form and sends the converted **character** pattern to a **recognizing** part 2. The **recognizing** part 2 refers to contents of a **dictionary** index table 3 to read out a **standard** pattern corresponding to this **character** pattern from one **dictionary** in a multifont **dictionary** 4 and compares both patterns. As the **result** , the **sum** of values of degrees of resemblance of plural **characters** in a prescribed line is stored in an accumulator 5. The **similar** operation is repeated for every **dictionary** in the **dictionary** 4, and the **sum** of values of degrees of resemblance of prescribed plural **characters** is stored in the accumulator. Sums of values of degrees of resemblance for respective **dictionaries** are **compared** in the **recognizing** part 2, and the **dictionary** for which the sum of values of degrees of resemblance is largest is selected from the **dictionary** 4.
?

014885676   **Image available**
WPI Acc No: 2002-706382/200276
XRPX Acc No: N02-556948
   Handwritten character **recognition apparatus used in computer system for**
   commercial applications, generates holistic **and** analytic **answer list**
   using character **string recognized in image and string segmentation list**
Patent Assignee: PARASCRIPT LLC (PARA-N); FILATOV A (FILA-I); KIL I
   (KILI-I); SEREGIN A (SERE-I)
Inventor: FILATOV A; KIL I; SEREGIN A
Number of Countries: 098 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020114523	A1	20020822	US 2001788032	A	20010216	200276	B
WO 200267189	A2	20020829	WO 2002US53	A	20020103	200276	
EP 1362322	A2	20031119	EP 2002720749	A	20020103	200377	
			WO 2002US53	A	20020103		

Priority Applications (No Type Date): US 2001788032 A 20010216
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020114523	A1		15	G06K-009/72	
WO 200267189	A2	E		G06K-009/68	

   Designated States (National): AE AG AL AM AU AZ BA BB BG BR BY BZ CA CH
   CN CO CR CU DM DZ EC ES GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
   KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU
   SD SE SG SI SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
   Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
   IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1362322	A2	E		G06K-009/68	Based on patent WO 200267189

   Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
   LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic):
   ...   A **holistic** recognition unit (102) recognizes a string of
   characters in the image and generates a **holistic** answer list (106)
   with a confidence value and a string segmentation list (103). An
   analytic recognition unit (104) recognizes the string of **characters**
   in the image, based on segmentation list to generate an **analytic**
   answer list (108). An answer module (110) determines the best
   recognition answer from the answer...
   ...   For recognizing handwritten **characters** in text loaded into
   computer system, used commercial applications such as mail sorting,
   bank check...

   ...By segmenting the string of **characters** in the image, the accuracy of
   recognizing the **characters** is enhanced...

   ... **Holistic** recognition unit (102...

   ... **Analytic** recognition unit (104...

... **Holistic** answer list (106...

... **Analytic** answer list (108
...Title Terms: **CHARACTER** ;
?

06444412   **Image available**
CHARACTER   RECOGNITION DEVICE AND **OUTPUT** METHOD FOR **CHARACTER RECOGNITION   RESULT**

PUB. NO.:   2000-029982 [JP 2000029982 A]
PUBLISHED: January 28, 2000 (20000128)
INVENTOR(s):   GOSHIMA HIROYASU
               NAKAGAMI SHOICHI
APPLICANT(s): HITACHI LTD
APPL. NO.:   10-197036   [JP 98197036]
FILED: July 13, 1998 (19980713)

CHARACTER   RECOGNITION DEVICE AND **OUTPUT** METHOD FOR **CHARACTER RECOGNITION   RESULT**

ABSTRACT
PROBLEM TO BE SOLVED: To make correcting efficient by extracting a **character** whose calculated conviction degree does not reach a specified value and outputting its **recognition result** and **character image** , side by side.
SOLUTION: The **character image** is cut out of a binary **image** and stored in an **image** area of a RAM 5, and the sheet number of the sheet where the **character image** is present, the page number of the **character** in the same sheet, an **image** area, a start point, an end point, and an item are stored in a ROM 5. **Character recognition** is performed by referring to a **dictionary** in a storage device 6 and the result is stored as a **recognition** result . The feature quantity of the **character image** is extracted and **compared** with a **standard** feature quantity to calculate the degree of conviction, which is stored as a degree of conviction. The calculated conviction degree is compared with a **threshold** and in the case of 'conviction degree (**threshold** ', a flag is set to '1' (ON). The input **image** and **recognition result** for which the flag is set ON are taken out of the RAM 5 by **characters**0 or items, sorted in the sorting order of the **characters** , and outputted to a display 8 or printer 9.

06178745   **Image available**
CHARACTER   RECOGNITION DEVICE AND MEDIUM

PUB. NO.:   11-120294 [JP 11120294 A]
PUBLISHED: April 30, 1999 (19990430)
INVENTOR(s):   KONDO KENJI
               MATSUKAWA YOSHIHIKO
               MEGATA TSUYOSHI
APPLICANT(s): MATSUSHITA ELECTRIC IND CO LTD
APPL. NO.:   09-285524   [JP 97285524]
FILED: October 17, 1997 (19971017)

CHARACTER   RECOGNITION DEVICE AND MEDIUM

ABSTRACT
PROBLEM TO BE SOLVED: To efficiently **recognize similar characters**
with high accuracy while improving possibility for a correct **answer
character** to be included in candidate **characters** by **recognizing** the
characters of a **character** string while referring to a **dictionary**
based on the combination of each **character** category belonging to a
similar character category group selected concerning the respective
characters of the **character** string.

SOLUTION: A **similar character** information storage means 4 stores plural
similar character category groups as the set of **character** categories
having feature amounts, which are expressed by digitizing the form of a
character image , in close **relation** inside a feature amount space.
Based on the feature amount extracted from the **character image** of a
character included in the **character0** string as the object of
recognition , a candidate selecting means 5 selects the **similar
character** category groups corresponding to the **character** . While
referring to the **dictionary** , a **dictionary reference** means 6
recognizes the **character** of the **character** string based on the
combination of each **character** category belonging to the **similar
character** category group selected concerning the respective **characters**
of the **character** string by the candidate selecting means 5.

33/3,K/3   (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO
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05931212   **Image available**
ONLINE **HAND - WRITTEN CHARACTER RECOGNITION** DEVICE

ONLINE **HAND - WRITTEN CHARACTER RECOGNITION** DEVICE

ABSTRACT
PROBLEM TO BE SOLVED: To provide an online **hand - written character
recognition** device which can **recognize characters** from input of the
print hand to input of script...

...SOLUTION: Feature points are extracted from a **hand - written**
coordinate string, and **dictionary** patterns are classified and **compared**
to **recognize** a **hand - writing character** , and the **recognition
result** is displayed. This online **hand - written character
recognition** device consists of a feature extraction part 100 which
obtains a feature quantity from plural dot strings of coordinate dot

strings and compares it with a **threshold** to extract feature points of hand - **writing** coordinates, a **recognition** **dictionary** part 400 where **standard** **character** patterns including off **strokes** are registered, and a backbone vector correspondence matching part 200 which performs successive matching processing between an input pattern and respective **dictionary** patterns based on corresponding points corresponding to vectors in four upward, downward, left, and right...

33/3,K/4   (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO
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05710993   **Image available**
METHOD AND DEVICE FOR **RECOGNIZING** VOICE

METHOD AND DEVICE FOR **RECOGNIZING** VOICE
...JAPIO KEYWORD:Speech **Recognition**0 & Synthesis)

ABSTRACT
PROBLEM TO BE SOLVED: To reduce a load applied to a computer by calculating convergent **likelihood** based on mouth shape information during a vocalizing section obtaining a candidate **word** from a photographing **image** of the mouth of a speaker...
...SOLUTION: A mouth shape **recognition** part 102 **recognizes** the shape and the movement of the mouth at a vocalizing time from a face **image** signal S101 (photographed **image**) read out from an **image** frame buffer 101. A **word** **dictionary** 104 stores syllable information and a phoneme **model** beforehand obtained **related** to the **word** candidate to be **recognized** . Further, a mouth shape syllable **matching** part 103 investigates a matching extent between the syllable information inputted from the **word** **dictionary** 104 and a syllable obtained from the operation of the mouth shape to output the result (mouth shape syllable **matching** score). Further, a **word** candidate convergent part 105 converges the **word** candidate according to the mouth shape syllable **matching** score. Then, a voice **recognition** part 108 **compares** a line of a voice frame S108 of an inputted sound section with the phoneme **model** S111 of the **word** converged by the **word** candidate convergent part 105, and **outputs** the **word** with the highest **likelihood** as the **recognition** **result** .

33/3,K/5   (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO
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04677012   **Image available**
METHOD AND DEVICE FOR **CHARACTER** **RECOGNITION**

APPLICANT(s): CANON INC [000100] (A Japanese Company or Corporation), JP
(Japan)
APPL. NO.: 05-160247 [JP 93160247]
FILED: June 04, 1993 (19930604)

METHOD AND DEVICE FOR **CHARACTER RECOGNITION**

ABSTRACT

PURPOSE: To reduce indicating operation for a **character** at the time of misrecognition correction and shorten the correcting operation time by displaying both the candidate **character** of an indicated **recognition result** and a selected corrected candidate **word** as corrected candidates at the same time...

... RAM 14, an interface 15, a display 16, an external storage device 17, and a **similarity** calculation part 18 are connected to a CPU 10 through a control line respectively. This **similarity** calculation part 18 inputs a **character image** of one **character** and obtains the **character** having the largest **similarity** to the **standard** pattern of each **character** . **Words** including the indicated **recognition result** are generated by using the candidate **character** and only the **word matching** a **word dictionary** is selected as a corrected candidate **word** among the generated **words** . Then the candidate **character** of the indicated **recognition result** and the candidate **word** which is selected are both displayed as corrected candidates at the same time.

33/3,K/6   (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO
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03484184   **Image available**
SIMILAR CHARACTER IDENTIFYING METHOD

PUB. NO.: 03-147084 [JP 3147084 A]
PUBLISHED: June 24, 1991 (19910624)
INVENTOR(s): MINEWAKI TAKAKUNI
APPLICANT(s): RICOH CO LTD [000674] (A Japanese Company or Corporation), JP
(Japan)
APPL. NO.: 01-285605 [JP 89285605]
FILED: November 01, 1989 (19891101)
JOURNAL: Section: P, Section No. 1255, Vol. 15, No. 376, Pg. 13,
September 24, 1991 (19910924)

SIMILAR CHARACTER IDENTIFYING METHOD

ABSTRACT

PURPOSE: To **identify similar characters** from each other with high accuracy by **identifying** the **similar characters** decided in advance in **recognition result** candidates by collation with a **dictionary** by collating the area ratio of a detected **character** with a **reference character** area ratio...
...CONSTITUTION: The normalization, the feature extraction, and the collation with data in a **dictionary** classified by every **character** registered on a **character dictionary** memory 15 of the **image** data of each **character** are performed at a **character recognition** part 14, and required correction is applied to the **recognition result** of the **character recognition** part 14 by performing **similar character recognition**0 using a **character** area ratio at a **similar character** judging part 18 and a **similar character** table memory 19, and a

correction result is outputted as the final **recognition result** .
Therefore, when two or more **similar characters** appear in the
recognition result candidates by certain **dictionary** collation, the
similar character can be **identified** by **comparing** the detected
character area ratio of the **character** with the **reference character**
area ratio of respective **similar character** . In such a way, the
similar characters hard to **identify** the collation with the
dictionary are **identified** with high accuracy.

33/3,K/7   (Item 7 from file: 347)

03231887   **Image available**
ON-LINE **HANDWRITTEN CHARACTER** INPUT DEVICE

ON-LINE **HANDWRITTEN CHARACTER** INPUT DEVICE

ABSTRACT
PURPOSE: To easily execute correction operation at the time of erroneous
recognition not by displaying only one **character** of a **recognized
result** but by displaying plural candidate **characters** and selecting the
character by an inputting person when the possibility of the erroneous
recognition is high in the **recognized result** of the input **character**

. . .

...CONSTITUTION: A **character recognition** part 3 **analyzes** coordinate
data from an input united type display 1 and executes **recognition**
processing by **comparing** a pattern with a **dictionary** 5. Then, the
recognized result is outputted and a display control part 4 controls
the display of a hand and **recognized result** , etc., to the input-display
united type display 1. When a distance between the input **character**
pattern and the **standard dictionary** pattern of the first candidate
character is larger than a certain **threshold** value, not only the first
candidate but also the plural candidate **characters** after the second
candidate are simultaneously displayed on the input united type display 1
and out of these candidate **characters** , the **recognized result** can be
determined by the instruction of the inputting person. Thus, when the
possibility of the erroneous **recognition** is high, attention is urged to
the inputting person and the correction operation can be

33/3,K/8   (Item 8 from file: 347)

02211484   **Image available**
 HAND - WRITTEN   CHARACTER   RECOGNITION   SYSTEM

PUB. NO.:   62-128384   [JP 62128384 A]
PUBLISHED: June 10, 1987 (19870610)
INVENTOR(s):   YURA KOJI
APPLICANT(s):   TOSHIBA CORP [000307] (A Japanese Company or Corporation), JP
                 (Japan)
APPL. NO.:   60-269618   [JP 85269618]
FILED: November 30, 1985 (19851130)
JOURNAL: Section: P, Section No. 637, Vol. 11, No. 350, Pg. 46,
                 November 17, 1987 (19871117)

 HAND - WRITTEN   CHARACTER   RECOGNITION   SYSTEM

                              ABSTRACT
PURPOSE: To improve the **recognition** accuracy by **comparing** the result of
collation between   **stroke**   information remained in a **character** pattern
and   **stroke**   information of a   **standard**   pattern so as to obtain the
result of   **recognition**   to the **character** pattern subject to **hand -
written** input...
...CONSTITUTION: The result of collation between the **stroke** information
of a **character** pattern subject to **hand - written** input and the **stroke**
information of the   **standard**   pattern is obtained by calculating the
similarity between corresponding   **strokes**   or distance. Then a **stroke**
in common between plural **recognition** object categories from the **stroke**
forming the   **hand - written**   **character** pattern is eliminated according
to the   **stroke** information in common between plural **recognition** object
categories registered in a   **standard**   pattern **dictionary** 13 and the
collation **result**   between the   **stroke**   information remained in the
character pattern and the **stroke** information of the **standard** pattern
is obtained. The result of collation is **compared** to obtain the **result**
of   **recognition**   to the   **character** pattern subject to **hand - 1written**
input. Thus, the   **hand - written**   **character**   **recognition** system with
high **recognition** accuracy is obtained.

 33/3,K/9   (Item 9 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

02107482   **Image available**
METHOD FOR **RECOGNIZING   HANDWRITTEN   CHARACTER**

PUB. NO.:   62-024382 [JP 62024382 A]
PUBLISHED: February 02, 1987 (19870202)
INVENTOR(s):   YAMASHITA SHIRO
                 MASUMI ABE
                 JIYUSETSUPE PINO KOBAYASHI
                 DEIIN SANGU
                 CHIN FUU FUENGU
                 JIYON ESU OSUTOROMU
APPLICANT(s):   C I C JAPAN KK [000000] (A Japanese Company or Corporation),
                 JP (Japan)
APPL. NO.:   60-161748   [JP 85161748]
FILED: July 24, 1985 (19850724)
JOURNAL: Section: P, Section No. 591, Vol. 11, No. 203, Pg. 53, July
                 02, 1987 (19870702)

METHOD FOR **RECOGNIZING   HANDWRITTEN   CHARACTER**

ABSTRACT

PURPOSE: To eliminate the need for special designation for types of input characters and also to improve the easy recognizing efficiency of handwritten characters , by using information which is less than a prescribed number of strokes and supplied in a prescribed area of an input area to recognize the types of input characters .

...

...CONSTITUTION: Strokes supplied onto an input tablet 1 by an input pen 2 are compared with the reference stroke stored previously in a template memory 4 through a stroke discriminating part 3. As a result , the strokes are sorted into a similar group and the number of input strokes are decided together with the types of input strokes used to specify the intended characters and the position information, etc. in combination with other input strokes . These decided factors are supplied to a character recognizing part 6. The part 6 compares those information with the character pattern information stored in a character dictionary memory 7. Then the types of characters are decided through a character type control part 70 and with reference to an input area discriminating part 5 in case the recognition is required for small letters. Thus it is possible to omit the special designation for types of input characters and also to improve the easy 1recognizing efficiency of handwritten characters .

33/3,K/10   (Item 10 from file: 347)
DIALOG(R)File 347:JAPIO
(c) 2003 JPO & JAPIO. All rts. reserv.

02078674   **Image available**
HANDWRITTEN WORD PROCESSOR

HANDWRITTEN   WORD   PROCESSOR
...JAPIO KEYWORD: **Word** Processors)

ABSTRACT

PURPOSE: To attain the effective input of Japanese words by using a handwritten character recognizer and a code converting means...
...CONSTITUTION: When handwritten characters are supplied to a tablet 1 serving as a handwritten character input means, the stroke patterns of these characters are sent to a recognizing part 2. The part 2 refers to a recognition dictionary 3 to compare an input pattern with a font pattern in the dictionary 3 and delivers the most similar code to an input buffer 4 as the result of recognition . The corresponding input data is stored in a text buffer 5 and sent to a display part 6. The part 6 refers to a font dictionary 7 to convert the JIS codes into a dot pattern and displays it on a CRT 8. Then KANA (Japanese syllabary)/ KANJI (Chinese

character) conversion is selected through the tablet 1. Thus a KANA/KANJI conversion part 9 sends...

... to the buffer 5 together with the JIS codes of the corresponding KANJI obtained with **reference** to a **word dictionary** 10. The contents of the buffer 5 are sent to the part 6 displays the...

 33/3,K/11   (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

013403506   **Image available**
WPI Acc No: 2000-575444/200054
XRPX Acc No: N00-425894
   Information retrieval system for portable information terminal, transmits obtained retrieve information from information retrieval unit to communication terminal
Patent Assignee: MITSUBISHI ELECTRIC CORP (MITQ)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 2000227923 A   20000815 JP 9929524   A   19990208 200054 B

Priority Applications (No Type Date): JP 9929524 A 19990208
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 2000227923 A   22 G06F-017/30

Abstract (Basic):
...   Keyword extraction unit (25) extracts keyword opposing to
   character recognition result information with **reference** to
   keyword **list** stored in keyword **dictionary** (24). The information
   retrieval unit (27) retrieves information from extracted keyword. The
   information transmitter (28...
...   Data receiver (20) receives communication data transmitted from
   communication terminal. Data converter (21) extracts **handwriting
   character** information to obtain **character recognition result**
   information by **comparing character recognition** of **standard
   handwriting character** information and **handwriting character**
   information...

...Portability is improved by reducing size and **weight** of information
   terminal. **Handwritten** character recognition information can be
   easily retrieved by the user, thus improving versatility...

...Keyword **dictionary** (24...

 33/3,K/12   (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

013037676   **Image available**
WPI Acc No: 2000-209528/200019
XRPX Acc No: N00-156379
   Recognition character **correction apparatus for** image **processing -
   has learning pattern in** dictionary **that** matches **acquired** character
   pattern and modified character **code followed by correction in case of
   incorrect** recognition

Patent Assignee: SHARP KK (SHAF)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 11143993 A   19990528 JP 97306103   A   19971107 200019 B

Priority Applications (No Type Date): JP 97306103 A 19971107
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 11143993 A   19 G06K-009/62

    Recognition   character **correction apparatus for** image **processing...**

...**has learning pattern in** dictionary **that** matches **acquired** character
  pattern and modified character **code followed by correction in case of
  incorrect** recognition

...Abstract (Basic): NOVELTY - The acquired **character** pattern input by
  the scanner (8) is **matched** with **dictionary** **character** patterns and
  the **character** code of **similar** **dictionary** **character** pattern is
  obtained as a **result** of **character** **recognition** . In case of
  incorrect **recognition** , the code is corrected in a correction unit
  (16). DETAILED DESCRIPTION - The acquired **character** pattern and
  corrected **character** code are **matched** mutually during a learning
  process and stored in learning pattern (15b) of **dictionary** (15).
  During next **recognition** process, the pattern (15b) is given priority
  over **reference** pattern (15a...

...USE - For correcting **recognition** character in **image** processing...

...ADVANTAGE - An incorrect **recognition** is reliably corrected using a
  simple apparatus. As the modified **character** code is also stored in
  separate pattern of **dictionary** it is considered as **dictionary**
  character code during next **recognition** cycle. Hence the apparatus
  performs functions other than correction also. An accurate **character**
  recognition **result** and a correct result are obtained since an
  optimum **dictionary** pattern portion is chosen. DESCRIPTION OF
  DRAWING(S) - The figure shows the functional block diagram of
  recognition **character** correction apparatus. (8) Scanner; (15)
  Dictionary ; (15a) **Reference** pattern ; (15b) Learning pattern ; (16)
  Correction unit...
Title Terms: **RECOGNISE** ;

  33/3,K/13   (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

012817897   **Image available**
WPI Acc No: 1999-624128/199954
XRPX Acc No: N99-460873
   Character recognition **apparatus for** recognizing handwritten
   character - **has evaluation unit which compares** reference **pattern in
   evaluation** dictionary **with** handwritten character **pattern for each**
   recognized character
Patent Assignee: TOSHIBA COMPUTER ENG KK (TOSH-N); TOSHIBA KK (TOKE)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 11272802 A   19991008 JP 9871984   A   19980320 199954 B

Priority Applications (No Type Date): JP 9871984 A 19980320
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 11272802   A   17 G06K-009/68

   Character   recognition **apparatus for** recognizing   handwritten
   character - ...
...has evaluation unit which compares reference **pattern in evaluation**
   dictionary **with** handwritten   character **pattern for each** recognized
   character

...Abstract (Basic): NOVELTY - Candidate bond unit (106) couples each
   candidate **character** from **recognition** unit (102) with corresponding
   similar   character from **comparison** unit (104) and **outputs** as
   global **recognized   character** . For each **recognized   character** ,
   evaluation unit (107) judges if **reference** pattern in evaluation
   dictionary (108) **matches** with **handwritten   character** pattern from
   character input device (101). DETAILED DESCRIPTION - An INDEPENDENT
   CLAIM is also included for **character   recognition** procedure for
   recognizing   handwritten   character .
      . . .

...USE - For **recognizing   handwritten   character** .
      . . .

...ADVANTAGE - Since **handwritten   character** is **recognized** only when it
   matches with **character** pattern in evaluation **dictionary** and as
   ranking is done for each **recognized   character** based on evaluation
   result , character pattern which **matches** first with stored pattern
   is put in higher order. As a result, most frequently occurring
   characters can be **recognized** at ease with rapidity. DESCRIPTION OF
   DRAWING(S) - The figure shows block diagram of components in **character
   recognition** apparatus. (101) **Character** input device; (102)
   Recognition unit; (104) **Comparison** unit; (106) Candidate bond unit;
   (107) Evaluation unit; (108) Evaluation **dictionary** .

Title Terms: **CHARACTER** ;

 33/3,K/14   (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

011901105   **Image available**
WPI Acc No: 1998-318015/199828
XRPX Acc No: N98-249610
   Character   recognition **method - involves correcting** comparison
   ranking **of** recognition **candidate included in single** character **area**
   so that it may become higher than comparison ranking **of other candidate**
Patent Assignee: OKI ELECTRIC IND CO LTD (OKID)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind   Date   Applicat No   Kind   Date   Week
JP 10116321   A   19980506 JP 96271150   A   19961014 199828 B

Priority Applications (No Type Date): JP 96271150 A 19961014
Patent Details: :
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 10116321   A   10 G06K-009/62

Character   recognition **method...**

...involves correcting comparison   ranking **of** recognition **candidate
included in single** character **area so that it may become higher than
comparison** ranking **of other candidate**

...Abstract (Basic): The method involves extracting the characteristic of
each **character   image** , from a medium. The **character** area data
which shows the **character** area where the **character   image** is
included, is generated. The **character** area data is **compared** to the
standard   character pattern stored in a **dictionary** . based on the
comparison   result , the **character** data is judged whether it is
included in a single **character** area...

...When the **character** data is in a single **character** area, the area
representation **dictionary** data which shows the variety of **dictionary**
corresponding to the variety of **character** included in the single
character area, is generated. The **comparison   ranking** of the
recognition candidate included in the single **character** area is
corrected so that it may become higher than the **comparison   ranking**
of other **recognition** candidate...

...ADVANTAGE - Reduces incorrect **recognition** rate...
Title Terms: **CHARACTER ;**

 33/3,K/15   **(Item 5 from file: 350)**
DIALOG(R)File 350:Derwent WPIX
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011363981   **Image available**
WPI Acc No: 1997-341888/199731
Related WPI Acc No: 1996-171783; 1997-310783
XRPX Acc No: N97-283595
   **Lexical processing method in computer - by using input interface and
   word generator to produce output as function of input word and
   confusion matrix that is** handwriting **error** model **based on**
   recognition **capabilities of classifiers used in pre-processing inputs**
Patent Assignee: MOTOROLA INC (MOTI)
Inventor: EMICO J H; MURDOCK M C; ERRICO J H
Number of Countries: 074 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 9722947	A1	19970626	WO 96US18926	A	19961127	199731	B
AU 9710611	A	19970714	AU 9710611	A	19961127	199744	
US 5802205	A	19980901	US 94304008	A	19940909	199842	
			US 95573711	A	19951218		

Priority Applications (No Type Date): US 95573711 A 19951218; US 94304008 A
  19940909
Patent Details:

Patent No	Kind Lan Pg	Main IPC	Filing Notes
WO 9722947	A1 E 64	G06K-009/62	

   Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU
   CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV
   MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US
   UZ VN
   Designated States (Regional): AT BE CH DE DK EA ES FI FR GB GR IE IT KE
   LS LU MC MW NL OA PT SD SE SZ UG

AU 9710611   A   Based on patent WO 9722947
US 5802205   A   G06K-009/00 CIP of application US 94304008

... by using input interface and word generator to produce output as
   function of input word and confusion matrix that is handwriting error
   model based on recognition capabilities of classifiers used in
   pre-processing inputs

...Abstract (Basic): The method involves receiving an input word and
   producing the lexical output as a function of the input word and a
   handwriting error model . A word confidence value is derived from
   the input word . A first result is generated by comparing the
   word confidence value to a first pair of thresholds . Finally the
   lexical output is selected according to the first result...
...The lexical output is selected from the group consisting of a rejection
   indicator, a candidate word , a suggestion list and the input word

        . . .

...ADVANTAGE - Lexical processor can be adapted to specific HRS or
   handwriting style. Processor does not misidentify proper nouns
...Title Terms: WORD ;

 33/3,K/16   (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

010384927   **Image available**
WPI Acc No: 1995-286241/199538
  Study registration appts. for handwriting character recognition
  appts. - matches handwritten character with selected candidate
  character which are displayed and registered as new character data if
  it does not have fixed routing
Patent Assignee: MATSUSHITA DENKI SANGYO KK (MATU)
Number of Countries: 001 Number of Patents: 001
Patent Family:
Patent No   Kind Date   Applicat No   Kind Date   Week
JP 7182460   A   19950721 JP 93322738   A   19931221 199538 B

Priority Applications (No Type Date): JP 93322738 A 19931221
Patent Details:
Patent No Kind Lan Pg   Main IPC   Filing Notes
JP 7182460   A   8 G06K-009/68

  Study registration appts. for handwriting character recognition
  appts...

... matches handwritten character with selected candidate character
   which are displayed and registered as new character data if it does not
   have fixed routing

...Abstract (Basic): The registration appts. consists of a character
   input part (101) which inputs a handwriting character . A character
   recognition part (102) compares the hand written character
   with the data in a dictionary part and performs character
   recognition . The candidate character is output according to the
   precedence of logical operator. A candidate character display part
   (103) displays the candidate character according to the ranking .
        . . .

...A registration **character** detection part (104) detects the **character**
demand by a person from the displayed **characters** . A **character**
registration part (105) **matches** the selected **character** with the
input **handwritten character** and registers it into the **dictionary**
part. As new data for **character recognition** , when the selected
character for **recognition** as a fixed **ranking** , then the
registration of the **character** is repeated...

...ADVANTAGE - Prevents unnecessary increase in size of **dictionary** ,
prevents incorrect **recognition** . Maintains quick nature of **reference**

...Title Terms: **HANDWRITING** ;

 33/3,K/17   (Item 7 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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009442828   **Image available**
WPI Acc No: 1993-136345/199317
Related WPI Acc No: 1998-171150
XRPX Acc No: N93-103979
 Method and apparatus for character   recognition - **executes**
  segmentation of character   images **from an input** image **and** character
     recognition **in parallel using separate processors**
Patent Assignee: CANON KK (CANO)
Inventor: IKEDA H; TANAKA T; UENO S
Number of Countries: 005 Number of Patents: 005
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 539158	A2	19930428	EP 92309572	A	19921020	199317	B
EP 539158	A3	19940209	EP 92309572	A	19921020	199518	
US 5684891	A	19971104	US 92961647	A	19921016	199750	
			US 94339879	A	19941114		
JP 3133797	B2	20010213	JP 91275115	A	19911023	200111	
JP 3126440	B2	20010122	JP 91272707	A	19911021	200112	

Priority Applications (No Type Date): JP 92199746 A 19920727; JP 91272707 A
   19911021; JP 91275115 A 19911023; JP 91288286 A 19911105
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 539158	A2	E	63	G06K-009/34	

    Designated States (Regional): DE FR GB

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 539158	A3			G06K-009/34	
US 5684891	A		57	G06K-009/34	Cont of application US 92961647
JP 3133797	B2		10	G06K-009/34	Previous Publ. patent JP 5114048
JP 3126440	B2		12	G06K-009/62	Previous Publ. patent JP 5108873

 Method and apparatus for character   recognition - ...

...**executes segmentation of** character   images **from an input** image **and**
   character   recognition **in parallel using separate processors**

...Abstract (Basic): The method comprises input of the original **image** and
   segmentation of the **character image** from the **image** original using
   a processor. The·segmented **character image** is transmitted by the
   processor to a second processor...

... **Character recognition** is performed in parallel with the segmentation of the **character image** . The method of **character recognition** include finding a **standard character** size from **characters** written and adopting the difference between the **standard** size and the size of each segmented **character image** . Another method involves quantifying **results** of **character recognition** of **character image** segmented initially, and evaluating the results of quantification...

...ADVANTAGE - Provides highly accurate **character recognition** .

...Abstract (Equivalent): A **character recognition** method comprising...

...an input step of inputting an **image** original...

...a segmentation step of segmenting **character image** blocks, which are written in said **image** original inputted by said input step...

...a **recognition** step of performing **character recognition** by **comparing** extracted features of the segmented **character image** blocks with information that has been stored in a prescribed **character dictionary** , and obtaining a degree of **similarity** ;
      . . .

...a setting step of setting **identification** information indicating whether or not each of the segmented **character image** blocks requires resegmentation based on the degree of **similarity** ;
      . . .

...a generation step of generating, for a group of consecutive segmented **character image** blocks that require resegmentation based on the **identification** information, a plurality of new **character image** blocks by using all possible consecutive combinations of the segmented **character image** blocks in the group that begin with a first segmented **character image** block in the group, subject to the condition that each new **character image** block has a width which is within a predetermined value...

...a repetition control step of repeatedly returning to said **recognition** step so as to perform **character recognition** on the plurality of new **character image** blocks; and...

...an output step of outputting a **recognition result** of the new **character image** block having the highest degree of **similarity** among the plurality of new **character image** blocks which have been generated in said generation step and subjected to **character recognition** in said **recognition** step, as a **recognition result** for a resegmented **image** block
...Title Terms: **CHARACTER** ;

 33/3,K/18   (Item 8 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003 Thomson Derwent. All rts. reserv.

007949331   **Image available**
WPI Acc No: 1989-214443/198930
XRPX Acc No: N89-163414
    Character recognition **system - includes device for obtaining coincidence between** recognition character **candidates and** character

patterns stored in dictionary **memory**
Patent Assignee: TOSHIBA KK (TOKE)
Inventor: ARIYOSHI S; OOI K; SASAKI H
Number of Countries: 004 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 325233	A	19890726	EP 89100819	A	19890118	198930	B
US 5020117	A	19910528	US 89298041	A	19890118	199124	
EP 325233	B1	19940727	EP 89100819	A	19890118	199429	
DE 68916978	E	19940901	DE 616978	A	19890118	199434	
			EP 89100819	A	19890118		

Priority Applications (No Type Date): JP 887927 A 19880118; JP 887926 A
   19880118
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 325233	A	E	15		
Designated States·(Regional): DE FR IT					
EP 325233	B1	E	20	G06K-009/72	
Designated States (Regional): DE FR IT					
DE 68916978	E			G06K-009/72	Based on patent EP 325233

   Character   recognition **system...**

...:**includes device for obtaining coincidence between** recognition
   character **candidates and** character **patterns stored in** dictionary
   memory

...Abstract (Basic): The system includes a device (21) for extracting in
   units of a **character** , a pattern of an input **character** string, and a
   pattern obtained by rotating the input **character** string pattern by a
   predetermined angle, and for obtaining **recognition   character**
   candidates for the extracted **character** patterns in units of a
   character . A device (23, 31, 37) serves for for obtaining a
   coincidence between the **recognition   character** candidates and the
   character patterns stored in **dictionary** memory...

...29, 33, 35) serve·for obtaining an order for computing the coincidence
   based on the **character** unit extracted by the device for obtaining the
   recognition   character candidate...
...Abstract (Equivalent): A **character** string **recognition** system for
   recognising an input **character** pattern string **comparing** input
   character patterns with **reference   character** patterns in a
   dictionary memory (33) which stores **characters** to be **recognised** ,
   said system comprising means (21) for extracting, in units of one
   character , patterns of each of a pattern of an input **character**
   string and a pattern obtained by rotating the input **character** string
   pattern by 180 degrees, and for obtaining **recognition   character**
   candidates for the extracted **character** patterns, said units either
   forming a complete **character** or being a part of a **character**
   consisting of several subpatterns laying closely side by side, first
   recognition   result memory means (23) for storing a group of a
   predetermined number of **recognition   character** candidates and
   corresponding **similarity** data of the **recognition   character**
   candidates for each **character** unit obtained by said **character**
   extraction and **recognition** means (21), second **recognition   result**
   memory means (47) for **similarly** storing groups of rotated
   recognition   character candidates and **similarity** data of the
   rotated **recognition   character** candidates, and address pointer

memory means (45) storing sequences of address pointers for accessing said first and second **recognition** **result** memory means (23, 47), wherein common addresses are assigned to groups of **recognition** **character** candidates of said first and second **recognition** **result** memory means (23, 47) corresponding in position within the input **character** string, said address pointer memory means (45) stores location addresses representing locations of said **recognition** **result** memory means (23, 47) storing each **character** candidate group, and stores the sequences of location addresses in an order of **character** candidates constituting **recognition** candidate **character** strings, and said first **recognition** **result** memory means (23) is accessed in accordance with address pointers read out from said address pointer memory means (45) in ascending order and said second **recognition** **result** memory means (47) is accessed in accordance with address pointers read out from said address...

...Abstract (Equivalent): **Characters** are extracted, in units of a **character** , from an input **character** string. The input **character** string is rotated by a set angle...

... **Recognition** **character** candidates for each **character** extracted and each **character** rotated. A coincidence between the **recognition** **character** candidates and the **characters** stored in the **dictionary** memory is obtained...

...USE - Handwritten **character** string **recognition** system for recognising input **character** by **comparing** input **character** with basic **character** in **dictionary** memory which stores **characters** to be **recognised** .
Title Terms: **CHARACTER** ;
?

```
File    9:Business & Industry(R)  Jul/1994-2003/Dec 18
           (c) 2003 Resp. DB Svcs.
File   15:ABI/Inform(R) 1971-2003/Dec 19
           (c) 2003 ProQuest Info&Learning
File   16:Gale Group PROMT(R) 1990-2003/Dec 19
           (c) 2003 The Gale Group
File   20:Dialog Global Reporter 1997-2003/Dec 19
           (c) 2003 The Dialog Corp.
File   47:Gale Group Magazine DB(TM) 1959-2003/Dec 17
           (c) 2003 The Gale group
File   75:TGG Management Contents(R) 86-2003/Dec W1
           (c) 2003 The Gale Group
File   80:TGG Aerospace/Def.Mkts(R) 1986-2003/Dec 19
           (c) 2003 The Gale Group
File   88:Gale Group Business A.R.T.S. 1976-2003/Dec 17
           (c) 2003 The Gale Group
File   98:General Sci Abs/Full-Text 1984-2003/Nov
           (c) 2003 The HW Wilson Co.
File  112:UBM Industry News 1998-2003/Dec 19
           (c) 2003 United Business Media
File  141:Readers Guide 1983-2003/Nov
           (c) 2003 The HW Wilson Co
File  148:Gale Group Trade & Industry DB 1976-2003/Dec 18
           (c)2003 The Gale Group
File  160:Gale Group PROMT(R) 1972-1989
           (c) 1999 The Gale Group
File  275:Gale Group Computer DB(TM) 1983-2003/Dec 19
           (c) 2003 The Gale Group
File  264:DIALOG Defense Newsletters 1989-2003/Dec 17
           (c) 2003 The Dialog Corp.
File  484:Periodical Abs Plustext 1986-2003/Dec W1
           (c) 2003 ProQuest
File  553:Wilson Bus. Abs. FullText 1982-2003/Nov
           (c) 2003 The HW Wilson Co
File  570:Gale Group MARS(R) 1984-2003/Dec 19
           (c) 2003 The Gale Group
File  608:KR/T Bus.News. 1992-2003/Dec 19
           (c)2003 Knight Ridder/Tribune Bus News
File  620:EIU:Viewswire 2003/Dec 18
           (c) 2003 Economist Intelligence Unit
File  613:PR Newswire 1999-2003/Dec 19
           (c) 2003 PR Newswire Association Inc
File  621:Gale Group New Prod.Annou.(R) 1985-2003/Dec 18
           (c) 2003 The Gale Group
File  623:Business Week 1985-2003/Dec 18
           (c) 2003 The McGraw-Hill Companies Inc
File  624:McGraw-Hill Publications 1985-2003/Dec 18
           (c) 2003 McGraw-Hill Co. Inc
File  634:San Jose Mercury  Jun 1985-2003/Dec 18
           (c) 2003 San Jose Mercury News
File  635:Business Dateline(R) 1985-2003/Dec 19
           (c) 2003 ProQuest Info&Learning
File  636:Gale Group Newsletter DB(TM) 1987-2003/Dec 19
           (c) 2003 The Gale Group
File  647:CMP  Computer Fulltext 1988-2003/Dec W2
           (c) 2003 CMP Media, LLC
File  674:Computer News Fulltext 1989-2003/Dec W1
           (c) 2003 IDG Communications
File  810:Business Wire 1986-1999/Feb 28
           (c) 1999 Business Wire
File  813:PR Newswire 1987-1999/Apr 30
```

? ds

Set	Items	Description
S1	3005550	(IMAGE? OR HANDWRIT? OR HAND()WRIT?)
S2	19009692	(RECOGNI? OR IDENTIF? OR DETERMIN? OR ANALY? OR PARSE OR P-ARSING OR TOKENI?)
S3	5299284	(WORD? ? OR CHARACTER? ? OR ALPHANUMERIC? OR STRING? ?(5N)-TEXT??? OR METASTROKE? ? OR STROKE? ?)
S4	90404	(PROTOTYPE OR REFERENCE OR MODEL OR STANDARD)(10N)S1
S5	127101	(MATCH? OR COMPAR? OR DIFFERENTIAT? OR CORRELAT? OR RELAT?-)(5N)S3
S6	108137	(DICTIONAR? OR LEXICON? OR THESAUR? OR GLOSSAR? OR CATALOG? OR LIST OR LISTS OR SELECTION?)(10N)S3
S7	982947	(CONFIDENCE OR SIMILAR? OR LIKELIHOOD OR LIKELINESS OR PRO-BABILIT? OR CHANCE? ? OR RANK OR RANKING OR WEIGHT? OR THRESH-OLD? ?)(15N)(ANSWER? ? OR RESULT? OR OUTPUT? ? OR OUTCOME? ? - OR PRODUCT)
S8	350952	(HOLISTIC? OR WHOLE OR SUM OR TOTAL?)(10N)S2
S9	22605536	(SEGMENT? OR PART? ? OR PIECE? ? OR SECTION? ? OR TOKEN? ?)
S10	0	S1(15N)S2(15N)S3(15N)S4(15N)S5(15N)S6(15N)S7(15N)S8(15N)S9
S11	9	S2(15N)S3(15N)S5(15N)S4(15N)S6
S12	6	RD S11 (unique items)
S13	3	S12 NOT PY>2001
S14	102	S2(15N)S3(15N)S8(15N)S7
S15	9	S14(15N)S9
S16	5	RD S15 (unique items)
S17	12	AU=(FILATOV, A? OR FILATOV A?)
S18	0	AU=(KIL I? OR KIL, I?)
S19	3	AU=(SEREGIN, A? OR SEREGIN A?)
S20	26	CO=PARASCRIPT
S21	0	CO=(CONVERSA AND WEB)
S22	26	(S17 OR S19 OR S20) AND S2
S23	8	S22(15N)S8
S24	15	RD S22 (unique items)
S25	12	S24 NOT PY>2001

13/3,K/1   (Item 1 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)
(c) 2003 ProQuest Info&Learning. All rts. reserv.

00988599 96-37992
The impact of new technology in machine vision
Mackrory, John; Daniels, Mark
Sensor Review v15n1 PP: 8-11 1995
ISSN: 0260-2288 JRNL CODE: SEN
WORD COUNT: 2392

...TEXT: basic methods of OCR are structure and correlation based. The
structure-based approach relies on **analysing** the list of each **character**
attribute. such as the number of straight segments, loops, waists, etc. The
system then works through a decision tree to decide on the **character** .
Correlation relies on training a set of **model** **characters** as already
described, and then all subsequent **images** can be judged on similarity to
the **model** (see Figure 3).(Figure 3 omitted)

Correlation can be achieved using a binary, grey scale...

13/3,K/2   (Item 1 from file: 16)
DIALOG(R)File   16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

02199535   Supplier Number: 42864011   (USE FORMAT 7 FOR FULLTEXT)
MITSUBISHI HAS PROTOTYPE NEURAL COMPUTER, OPTICAL NEURONE
Computergram International, n1891, pN/A
March 30, 1992
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 131

   (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...network computer that uses logical as well as intuitive processes to
achieve higher accuracy in **recognising** and interpreting **handwriting** and
spelling. The **prototype0** uses its intuitive function to take stabs at
recognising a **word** , then **compares** the result with a **dictionary**
stored in the computer. The process is repeated several times until an
acceptable answer is found. The company claims that the computer has a 95%
accuracy rate **recognising** English handwriting fed into it by a scanner.
Mitsubishi also says that it had developed...

13/3,K/3   (Item 1 from file: 88)
DIALOG(R)File   88:Gale Group Business A.R.T.S.
(c) 2003 The Gale Group. All rts. reserv.

04038839   SUPPLIER NUMBER: 18668620
**Nonlinear cascaded correlation processes to improve the performances of
   automatic spatial-frequency-selective filters in pattern recognition.**
Dubois, Frank
Applied Optics, v35, n23, p4589(9)
August 10, 1996
ISSN: 0003-6935   LANGUAGE: English   RECORD TYPE: Abstract

AUTHOR ABSTRACT: A **recognition** process consisting of two cascaded

correlation stages with a sigmoid nonlinearity applied in the first...

...computed to give prespecified central correlation amplitudes in the second correlation plane when inputs are **reference** **images** . It is also desired that the second correlation amplitudes with the training images should minimize...

...and compared with the one-stage correlation system that works with the automatic spatial-frequency **selection** filter. Key **words** : Pattern **recognition** , **correlation** , synthetic discriminant function.
?

16/3,K/1   (Item 1 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

01325032 99-74428
Understanding the financial implications of APGs
Abbey, Duane C; Blount, L Lamar
Healthcare Financial Management   v50n10   PP: 50-55   Oct 1996
ISSN: 0735-0732   JRNL CODE: HFM
WORD COUNT: 2578

...TEXT: together, and only the visit assigned the highest reimbursement
amount will be paid.

APG weight **determination** . As with DRGs, APG weight **determination** is
critical to **total** reimbursement levels. APG weights are typically
determined through a statistical process using charges and other claims
data taken from submitted UB-92s, CPT procedure codes, and HCPCS
alphanumerical supply codes. It is important that healthcare
organizations submit correctly coded claims that exhibit consistent
charges. If the coding is incorrect and the charges are inconsistent, the
APG **weights** will be skewed, **resulting** in inconsistent payment amounts.

APG payment rates. Various third- **party** payers may use different methods
for **determining** payment rates under APGs. For government programs, the
methodology will most likely be a statistical **analysis** of provider cost
reports. While the statistical methods are complex, the basic idea is that
...

16/3,K/2   (Item 2 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00740286 93-89507
The three T's for a talking online catalog: Technology, teamwork, teaching
Grant, Wallace C; Jones, Dorothy E
Information Technology & Libraries   v12n2   PP: 193-202   Jun 1993
ISSN: 0730-9295   JRNL CODE: JLA
WORD COUNT: 6167

...TEXT: user controls the voice output quality and quantity via the Vert
Plus software. The user **determines** whether **words** are spoken as **whole**
words or spelled out as groups of letters. The pronunciation of **words**
or symbols may be adjusted to the user's taste, as can the output voice's
volume, pitch, and rate. The user also has control over the **parts** of the
screen that are turned into spoken **output** .

Screen enlargement is a **similar** process. The Vista software accesses the
block of computer memory containing the information presented on...

16/3,K/3   (Item 3 from file: 15)
DIALOG(R)File   15:ABI/Inform(R)

00147707 81-17581
Mobility and Its Alternatives in a National R&D System
Goldberg, A. I.; Kats, R.; Weinreb, B.

...ABSTRACT: influenced by structural factors (i.e., a more efficient
communication system between institutes, researchers taking **part** in work
at several institutes, adaptive organizational arrangements that vary with
the research staff's **character** and changes in R & D priorities) which can
produce **similar**   **results** . In Israel, the national R & D system is
characterized by a high degree of effectiveness...

... in the US or the UK, but with fully developed compensatory alternative
structural arrangements. Policy **analysts**   need to consider the **total**
system when they examine factors leading to R & D effectiveness. While too
much mobility defeats...

... variable like mobility may be modified by the extent to which other
structural factors provide **similar**   **results** .

16/3,K/4   (Item 1 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
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...   setting of the original face than in the setting that had undergone
spacing or than **identification** of an isolated feature. Furthermore,
Tanaka and Sengco suggest that superiority studies and whole/ **part**
advantage studies are based on two different processes, mainly because with
the superiority effects one does not obtain the **whole** / **part** advantage,
whereby **recognition** of **part** of the face in the setting of the face is
higher than **recognition** of the isolated **part** , and because **similar**
results were obtained for objects and **words** for which shared
configuration could not be found (e.g. Enns & Gilani, 1988; Wheeler, 1970
...

16/3,K/5   (Item 2 from file: 88)
DIALOG(R)File 88:Gale Group Business A.R.T.S.
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...AUTHOR ABSTRACT: a small negative shift in activation and fast
inactivation of the channel was prevented. Our **results** demonstrate that
K294 divides the S4 **segment** into functionally different regions, and that

the voltage **threshold** for activation and inactivation of the channel is not **determined** by the **total** charge on S4. Key **words** : Polyorchis penicillatus. Hydrozoa, Shaker (K.sup.+) channels. jShak1, jShak2, site-directed mutagenesis, S4 **segment** , voltage sensing, charge, evolution, activation. inactivation. gating valence, threshold.
?

3061294 Supplier Number: 03061294   (USE FORMAT 7 OR 9 FOR FULLTEXT)
Niwot, Colo.-Based Company's Technology Helps Read, Sort Documents
(Article profiles Parascript a handwriting recognition technology company
  that is targeting high volume data processing users)
Daily Camera , p N/A
February 17, 2001
DOCUMENT TYPE: Regional Newspaper; Company Overview ISSN: 0746-8733 (
United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 795

      (USE FORMAT 7 OR 9 FOR FULLTEXT)
(Article profiles Parascript a handwriting recognition technology company
  that is targeting high volume data processing users)

TEXT:
By Matt Branaugh

A Niwot company pioneering handwriting **recognition** technology says its
products can render even the sloppiest handwriting useful for businesses.
Parascript's...
...can take information and do a variety of things with it -- Parascript
products read and **analyze** print, sorting the documents in the process.
Rather than read labels letter by letter, Parascript...

...loops, character style and slant. By doing so, the neural network has
the ability to **recognize** "street" in a variety of ways when it sees the
word on a label.

Businesses...

...other entertainment software applications.

After the ParaGraph sale, Pearlman created Parascript to continue pursuing
the **recognition** technologies. At the time, the company had 18 employees.
It now has 102 -- 60 in...

...that can manage the information.

Martin Reynolds, a research fellow with Gartner Dataquest, said handwriting
 recognition technologies is small market with limited demand.

But it is an important technology nonetheless, Reynolds...

COMPANY NAMES: **PARASCRIPT**

1688911 Supplier Number: 01688911   (USE FORMAT 7 OR 9 FOR FULLTEXT)
COLORADO'S PARASCRIPT INTRODUCES HANDWRITING- RECOGNITION SOFTWARE
(Parascript has launched five new, software products developed in Russia
  that recognize natural, cursive handwriting)

(USE FORMAT 7 OR 9 FOR FULLTEXT)

COLORADO'S PARASCRIPT INTRODUCES HANDWRITING- RECOGNITION **SOFTWARE**
(Parascript has launched five new, software products developed in Russia that recognize natural, cursive handwriting)

ABSTRACT:
Parascript (Boulder, CO) has launched five new, software products developed
in Russia that **recognize** natural, cursive handwriting. It claims to be
the first US firm to produce such technology...

...Parascript is an eight-month-old, software firm that was created solely
to focus on **recognizing** handwriting. Its R&D, engineering, customization
and integration facilities are based in Moscow, Russia. Article...

TEXT:
...Sydney Straub Nov. 19--Parascript, a Boulder software company, has
introduced five new products that **recognize** unconstrained natural
handwriting. Developed in Russia, Parascript's natural handwriting
recognition products reduce manual keyboard labor for data entry by
matching handwriting that is printed or...

...technology. Mark Gross, an assistant professor at the University of
Colorado who specializes in handwriting- **recognition** technology, agrees
that Parascript products break new ground. "Their stuff is really excellent
and it...

...write." Gross is also director of Sundance Lab, which is researching
similar computer technology to **recognize** sketches and diagrams for
transmission to another computer. Parascript started in March after its
president...

...and virtual reality product developer in Campbell, Calif. Parascript was
formed to concentrate solely on **recognizing** handwriting, Raihala said.
While technology that **recognizes** hand-printed letters in boxes is already
available, Parascript's products **recognize** natural cursive handwriting.
An item is scanned or faxed into a computer, and the programs...

COMPANY NAMES: **PARASCRIPT**

     ...   traditional customer base of educators, the company looked for a

competitive edge through intelligent character **recognition** (ICR). John
Henry, manager of imaging operations, says, "We had a mature imaging system
(from...

...says. "So we needed to find the right group to do it."
      TIAA-CREF selected **Recognition** Research, Inc. (RRI, Blacksburg,
VA). "We were very impressed with their development capabilities and
programming...

...1999. The solution has resulted in a 50 percent reduction in the time
needed to **identify** and route customer requests, and data-entry associates
are processing up to five times the...

...retirement products, long-term care, mutual funds, annuities.
      VENDOR/TECHNOLOGY:
      Parascript (Niwot, CO) ICR Engine; **Recognition** Research, Inc.
(Blacksburg, VA) integration solution; McKesson-HBOC (San Francisco)
imaging system.
      THE CHALLENGE:
      Find...
COMPANY NAMES: **Parascript** ; **Recognition Research Inc.** ; Teachers
   Insurance and Annuity Association

 25/3,K/4   (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

07832533   Supplier Number: 65241856 (USE FORMAT 7 FOR FULLTEXT)
"Field based" check and remittance processing adds accuracy.(Brief Article)
ABA Banking Journal, v92, n9, p116
Sept, 2000
Language: English   Record Type: Fulltext Abstract
Article Type: Brief Article
Document Type: Magazine/Journal; Trade
Word Count: 285

   (USE FORMAT 7 FOR FULLTEXT)

ABSTRACT:
Checkplus Total **Recognition** software from Parascript, Niwot, Colo.,
brings newfound accuracy to check and remittance processing   ...
TEXT:
Checkplus Total **Recognition** software from Parascript, Niwot, Colo.,
brings newfound accuracy to check and remittance processing--with a...
     The technology is based on the company's market-tested natural
handwriting **recognition** technology incorporated in the company's
CheckScript product already in use by many banks.
      Like...

...the courtesy and legal amounts on checks to cross-validate the two, as
well as **identifying** entire words and fields, resulting in higher level of
accuracy. But Check-Plus can also...

...from all proof-of-deposit items--including deposit slips, and cash
tickets.
      The company's recognition engine works by interpreting cursive and
printed handwriting as a progression of motions, which are extracted as a
series of hieroglyphic shapes that form a **recognition** alphabet.
Dictionaries and databases -of words, addresses, and numbers -- then

perform in-context **analysis** on the extracted elements, in essence comparing them to the words and elements in the database.

As a result, the engine can **identify** cursive, printed, or in-machine print characters, limiting manual processing and saving labor costs. The...

COMPANY NAMES: **Parascript**

25/3,K/5   (Item 3 from file: 16)
DIALOG(R)File   16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

06662601   Supplier Number: 55863757   (USE FORMAT 7 FOR FULLTEXT)
MailCode and Parascript Partner on Interoffice Envelope Solution.
PR Newswire, p3547
Sept 27, 1999
Language: English   Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 516

...   AutoScript is made possible through the integration of Parascript's FieldScript(R) NHR technology. FieldScript **recognizes** cursive handwriting, unconstrained handprint, and machine print -- individually or in any combination.

"Finally, we have...

...the integration of Parascript's FieldScript NHR technology, Olympus has the ability to feed, images, **recognize** and sort interoffice envelopes, previously too difficult to read.

"We are pleased to work with an industry leader such as MailCode," commented Denny Chrismer, chief operations officer for Parascript. "We **recognized** early on that the Olympus total mail processing solution had unparalleled versatility and functionality. With...

...flexible MLOCR sorter available. Olympus is the first commercially available high-speed.Multiline Optical Character **Recognition** (MLOCR) mail sorter system capable of processing post cards to flat mail. This versatility combined...

...s postal systems.

Headquartered in Boulder, Colo., Parascript provides state-of-the-art natural handwriting **recognition** under the trademark, NHR(TM) technology. This unique technology accepts scanned or faxed images of...

...of the two, and provides the highest level of accuracy, speed and intelligence of any **recognition** process on the market today. Parascript markets through OEM's, system integrators, value-added resellers...

COMPANY NAMES: **Parascript**

25/3,K/6   (Item 4 from file: 16)
DIALOG(R)File   16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

04985873   Supplier Number: 47324039   (USE FORMAT 7 FOR FULLTEXT)
MITEK, ORBOGRAPH TOUT CAR SYSTEMS
Item Processing Report, v8, n8, pN/A
April 24, 1997
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 264

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...they hope will profit from the rising demand among financial
institutions and remittance processors for **recognition** technology.
    Mitek is partnering with Boulder, Colo.-based Parascript to develop
The Financial Document Suite, **recognition** products designed for payment
processing applications.
    The first of these products, called CheckScript, is aimed at check
processors. The system uses two engines for courtesy amount **recognition**
(CAR) and performs **recognition** on the legal amount line on checks.
    Results from the two CAR engines are cross validated with the legal
amount **recognition** to reduce errors and increase the product's read rate
on checks. Parascript President Bill...
...the system's processing time; enables systems integrators to implement
one-pass grayscale or bitonal **recognition** capabilities at rated transport
speeds; and allows operations supervisors to scan the CAR system's...
COMPANY NAMES: Mitek Systems Inc.; Orbograph; **Parascript**

  25/3,K/7   (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
(c) 2003 The Gale Group. All rts. reserv.

04770444   Supplier Number: 47022116   (USE FORMAT 7 FOR FULLTEXT)
Parascript Offers Products.
Document Imaging Report, v7, n1, pN/A
Jan 8, 1997
Language: English   Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 88

    (USE FORMAT 7 FOR FULLTEXT)
TEXT:
...offering five products to automate manual data entry. The products use
Parascript's software for **recognizing** unconstrained, handwritten text and
numerals. They are designed to capture handwritten fields on forms that...
COMPANY NAMES: **Parascript**

  25/3,K/8   (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2003 The Gale Group. All rts. reserv.

12014928   SUPPLIER NUMBER: 61641479   (USE FORMAT 7 OR 9 FOR FULL TEXT)
The Data Entry Alternative.
Unoski, John
ABA Banking Journal, 92, 4, 60
April, 2000
ISSN: 0194-5947   LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 295   LINE COUNT: 00029

    Data entry dollars
    Outsourced or in-house, data entry is the most labor-intensive
recognition / conversion method. Estimates place the total annual cost of a
data entry operator at $40...

  ...more.
    ICR/OCR shortfalls
    ICR and OCR systems offer little to alleviate the situation. Neither

recognizes cursive handwriting, for example, and ICR's handprint
recognition is limited.
    Total (**Recognition** .sup.TM) arrives
    Now Parascript's Total **Recognition** technology presents an
uncompromising solution to document **recognition** . The technology
recognizes any style or combination of cursive handwriting, hand print,
and machine print, then converts it to ASCII. Free from the restrictions of
early generation, character-based systems, Total **Recognition** provides
versatility and accuracy comparable to manual data entry and at cost
savings up to...

...TM)
    Available as easily integrated software development kits, both
CheckPlus and FieldScript incorporate powerful Total **Recognition**
features. The new CheckPlus expedites processing of checks, cash tickets
and deposit slips. It **recognizes** and crossvalidates legal and courtesy
amounts on personal and business checks. On personal checks, it also
recognizes payee information. FieldScript delivers fast, accurate
recognition of fields in virtually any form, such as a loan application,
without forms modification. Like other Total **Recognition** products,
FieldScript features data crossvalidation and whole-word **recognition** .
    John Unoski, Vice President of Business Development for Parascript.
    (1.),(2.) 1999 Study on the...

COMPANY NAMES: **Parascript** --

25/3,K/9   (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2003 The Gale Group. All rts. reserv.

10639684   SUPPLIER NUMBER: 20866472   (USE FORMAT 7 OR 9 FOR FULL TEXT)
Parascript Names Ralph H. Petri as Western Area Sales Director; New Western
    Area Sales Director Named
PR Newswire, p0701LAW002
July 1, 1998
LANGUAGE: English   RECORD TYPE: Fulltext
WORD COUNT: 406   LINE COUNT: 00039

TEXT:
    ...July 1 /PRNewswire/ -- Strengthening its commitment to secure the
leadership position in the natural handwriting **recognition** market,
Parascript, LLC, a software development company specializing in
state-of-the- art Natural Handwriting **Recognition** (NHR(TM)) technology,
today announced that Ralph H. Petri has joined the company as director...
...   the overwhelming interest in our NHR(TM) technology based products,
we anticipate the natural handwriting **recognition** market to grow at a
phenomenal rate over the next several years. In order to...

...College in Florida.
    Headquartered in Boulder, CO, Parascript provides state-of-the-art
Natural Handwriting **Recognition** (NHR(TM)). This unique technology accepts
scanned or faxed images of cursive handwriting, handprint, or...

...of the two, and provides the highest level of accuracy, speed and
intelligence of any **recognition** process on the market today. Parascript
markets through system integrators, value-added resellers and government...

COMPANY NAMES: **Parascript** --

25/3,K/10   (Item 1 from file: 608)
DIALOG(R)File 608:KR/T Bus.News.
(c)2003 Knight Ridder/Tribune Bus News. All rts. reserv.

06875453   (USE FORMAT 7 OR 9 FOR FULLTEXT)
Niwot, Colo.-Based Company's Technology Helps Read, Sort Documents
Matt Branaugh
Daily Camera, Boulder, Colo
February 17, 2001
DOCUMENT TYPE: NEWSPAPER   RECORD TYPE: FULLTEXT   LANGUAGE: ENGLISH
WORD COUNT: 882

  LEAD PARAGRAPH: Feb. 17--A Niwot company pioneering handwriting
recognition technology says its products can render even the sloppiest
handwriting useful for businesses.

TEXT: By Matt Branaugh, Daily Camera, Boulder, Colo.
     Feb. 17--A Niwot company pioneering handwriting **recognition**
technology says its products can render even the sloppiest handwriting
useful for businesses.
     Parascript's...

...can take information and do a variety of things with it -- Parascript
products read and **analyze** print, sorting the documents in the process.
Rather than read labels letter by letter, Parascript...
...loops, character style and slant. By doing so, the neural network has
the ability to **recognize** "street" in a variety of ways when it sees the
word on a label.
     Businesses...

...other entertainment software applications.
     After the ParaGraph sale, Pearlman created Parascript to continue
pursuing the **recognition** technologies. At the time, the company had 18
employees. It now has 102 -- 60 in...

...that can manage the information.
     Martin Reynolds, a research fellow with Gartner Dataquest, said
handwriting **recognition** technologies is small market with limited demand.
     But it is an important technology nonetheless, Reynolds...

...COMPANY NAMES: Manhattan Bank ; Daily Camera ; First World
   Communications Inc ; Knight Ridder/Tribune Business News ; Lockheed
   Martin ; **Parascript** ; ParaGraph International Inc ; Reynolds ; Silicon
   Graphics Inc ; U S Postal Service ; UNISYS

25/3,K/11   (Item 2 from file: 608)
DIALOG(R)File 608:KR/T Bus.News.
(c)2003 Knight Ridder/Tribune Bus News. All rts. reserv.

06735781   (USE FORMAT 7 OR 9 FOR FULLTEXT)
Niwot, Colo., Firm's Technology Deciphers the Writing on the Envelope
Glenn Meyers
Denver Post
January 03, 2000
DOCUMENT TYPE: NEWSPAPER   RECORD TYPE: FULLTEXT   LANGUAGE: ENGLISH
WORD COUNT: 900

  ...LEAD PARAGRAPH: meeting with Lockheed Martin Postal Systems, a huge

potential client for his Russian-developed handwriting- **recognition** software. The result of his efforts was a hastily planned, 45-minute presentation between flights...

...TEXT: meeting with Lockheed Martin Postal Systems, a huge potential client for his Russian-developed handwriting- **recognition** software. The result of his efforts was a hastily planned, 45-minute presentation between flights...

...on each letter.
     Pearlman, a Boulder entrepreneur and former attorney, came across Parascript's handwriting- **recognition** technology during a trip to Russia in 1988. Armed with seed capital from Astarte Inc...

...the greatest value I would find was in their intellectual property," says Pearlman.
     The handwriting- **recognition** technology originated in the mid 1970s, when a group of Soviet scientists began developing an automated handwriting- **recognition** system based on the ideas of Soviet scientist Shelya Guberman. After his trip to Russia...

...American investors.
     The challenge before the venture, then called Paragraph, was to bring the handwriting **recognition** technology to a market-ready state.
     But that was far from an easy task.
     Recognizing natural handwriting is a particular challenge because it demands tools that emulate the complex functions...

...the technology in banking as well as letter and package handling. Parascript also makes handwriting- **recognition** software for banks, which use it to read checks and other documents. Another company, France...

COMPANY NAMES: Astarte Inc ; A2iA ; Denver Post ; Knight Ridder/Tribune
   Business News ; Lockheed Martin Postal Systems ; **Parascript** ; Postal
   Service ; Silicon Graphics

 25/3,K/12   (Item 3 from file: 608)
DIALOG(R)File 608:KR/T Bus.News.
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521620   Story Number: 9798   (USE FORMAT 7 OR 9 FOR FULLTEXT)
COLORADO'S PARASCRIPT INTRODUCES HANDWRITING- RECOGNITION **SOFTWARE**
Patricia Sydney Straub
Daily Camera (Boulder, Colorado)
Nov 19, 1996 03:03 E.T.
DOCUMENT TYPE: Newspaper   RECORD TYPE: Fulltext   LANGUAGE: English
WORD COUNT: 0592

COLORADO'S PARASCRIPT INTRODUCES HANDWRITING- RECOGNITION **SOFTWARE**

 LEAD PARAGRAPH: Nov. 19--Parascript, a Boulder software company, has introduced five new products that **recognize** unconstrained natural handwriting.

TEXT: Nov. 19--Parascript, a Boulder software company, has introduced five new products that **recognize** unconstrained natural handwriting.
     Developed in Russia, Parascript's natural handwriting **recognition** products reduce manual keyboard labor for data entry by matching handwriting that is printed or...

...technology.

Mark Gross, an assistant professor at the University of Colorado who specializes in handwriting- **recognition** technology, agrees that Parascript products break new ground.

"Their stuff is really excellent and it...

...write."

Gross is also director of Sundance Lab, which is researching similar computer technology to **recognize** sketches and diagrams for transmission to another computer.

Parascript started in March after its president...

...and virtual reality product developer in Campbell, Calif. Parascript was formed to concentrate solely on **recognizing** handwriting, Raihala said.

While technology that **recognizes** hand-printed letters in boxes is already available, Parascript's products **recognize** natural cursive handwriting. An item is scanned or faxed into a computer, and the programs ...

COMPANY NAMES: College of Architecture and Planning ; Daily Camera ;
  Knight Ridder/Tribune Business News ; **Parascript** ; ParaGraph
  International Inc ; Sundance Lab ; University of Colorado

?

Search Instruction for case 09/788,032

Searches should convey this concept: A method or apparatus that recognize a string of character/word/metastroke/alphanumeric/letter by maching an input to the string of prototype/reference character/words/metrstroke...etc in a dictionary/lexicon to generate the recognition result.

Key words for the search:

- word/character/alphanumeric/string/metastrokes/strokes   near/with recognition/identification/determination

- match/compare/differentiate with/near word/character/alphanumeric/string/metastrokes/strokes with/near/same prototype/reference character/alphanumeric/string/metastrokes/strokes with/near/same dictionary/lexicon

- confidence/similarity/likelihood/probabality

- holistic/whole/sum/total near/with/same recognition/identification/determination
- answer/result/output/outcome

Search Instruction for case 09/788,032

Searches should convey this concept: A method or apparatus that recognize a string of character/word/metastroke/alphanumeric/letter by maching an input to the string of protytype/reference character/words/metrstroke...etc in a dictionary/lexicon to generate the recognition result.

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- confidence/similarity/likelihood/probabality

- holistic/??and its symnonyms??
- answer/result/output/outcome

Search Instruction for case 09/788,032

Searches should convey this concept: A method or apparatus that recognize a string of character/word/metastroke/alphanumeric/letter by maching an input to the string of prototype/reference character/words/metrstroke...etc in a dictionary/lexicon to generate the recognition result.

Key words for the search:

- word/character/alphanumeric/string/metastrokes/strokes near/with recognition/identification/determination

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- confidence/similarity/likelihood/probabality

- holistic/??and its symnonyms??
- answer/result/output/outcome

? ds

```
Set     Items    Description
S1     799291    (IMAGE? OR HANDWRIT? OR HAND()WRIT?) AND (RECOGNI? OR IDEN-
                 TIF? OR DETERMIN? OR ANALY? OR PARSE OR PARSING OR TOKENI?)
S2     957970    (WORD? ? OR CHARACTER? ? OR ALPHANUMERIC? OR STRING? ?(5N)-
                 TEXT??? OR METASTROKE? ? OR STROKE? ?)
S3     352258    (RECOGNI? OR IDENTIF? OR DETERMIN? OR ANALY? OR PARSE OR P-
                 ARSING OR TOKENI?) AND S2
S4     139873    (PROTOTYPE OR REFERENCE OR MODEL OR STANDARD) AND S2
S5      55313    (MATCH? OR COMPAR? OR DIFFERENTIAT? OR CORRELAT? OR RELAT?-
                 )(5N)S3
S6    1517443    (DICTIONAR? OR LEXICON? OR THESAUR? OR GLOSSAR? OR CATALOG?
                 OR LIST OR LISTS OR SELECTION?)
S7     125751    (CONFIDENCE OR SIMILAR? OR LIKELIHOOD OR LIKELINESS OR PRO-
                 BABILIT? OR CHANCE? ? OR RANK OR RANKING OR WEIGHT? OR THRESH-
                 OLD? ?) AND S2
S8      12325    (HOLISTIC? OR WHOLE OR SUM OR TOTAL?)(10N)S2
S9   14597192    (ANSWER? ? OR RESULT? OR OUTPUT? ? OR OUTCOME? ? OR PRODUC-
                 T)
S10   5106362    (SEGMENT? OR PART? ? OR PIECE? ? OR SECTION? ? OR TOKEN? ?)
S11         0    S1(S)S4(S)S5(S)S6(S)S7(S)S8(S)S9(S)S10
S12      6489    S8(15N)S3
S13      1765    S5 AND S4 AND S6
S14       657    S13 AND S7
S15        28    S14 AND S8
S16        26    RD S15 (unique items)
```

```
S17       22    S16 NOT PY>2001
S18       13    S17 AND S9
S19        3    S17 AND S1
S20      113    S14 AND S1
S21       81    S20 AND S9
S22       81    S21 AND S3
S23       58    RD S22 (unique items)
S24       43    S23 NOT PY>2001
S25       18    S24 AND S10
S26       15    S25 NOT (GIFTEDNESS OR TEACHING()LOW()LEVEL(2N)ADULT OR LA-
                   BOR()MARKET)
S27      709    AU=(FILATOV, A? OR FILATOV A?)
S28        8    AU=(KIL I? OR KIL, I?)
S29      319    AU=(SEREGIN, A? OR SEREGIN A?)
S30        1    CO=PARASCRIPT
S31       20    (S27 OR S28 OR S29 OR S30) AND S1
S32        9    RD S31 (unique items)
S33        8    S32 NOT (S26 OR S19 OR PY>2001)
S34        6    S33 NOT (GLASS()BLOCKS OR ADAPTIVE()TELESCOPE)
```

19/3,K/1   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC

00291298   INSPEC Abstract Number: C71017766
 Title: **Multilevel** character   recognition **system**
  Author(s): Cutaia, A.
  Journal: IBM Technical Disclosure Bulletin   vol.13, no.12   p.3739-42
  Publication Date: May 1971 Country of Publication: USA
  CODEN: IBMTAA ISSN: 0018-8689
  Language: English .
  Subfile: C

 Title: **Multilevel** character   recognition **system**
  Abstract: In one type of optical **character**   **recognition** (OCR) system,
an entire electronic . **image** of an input **character** is **correlated** with a
set of corresponding **reference** patterns representing a number of ideal
 characters in an alphabet to be **recognized** . Such a ' **total** -mask'
system is capable of high **recognition** rates on poor-quality printing, but
it is very slow, especially when the **character** set is large. In.another
type of OCR system, only selected portions of the input **character** are
 compared with references representing corresponding portions of the ideal
 characters . This 'partial-mask' system,-which commonly employs data from
widely spaced scans, can be simple and rapid; on the other hand, its
 recognition rate is usually limited to 95-98% or less. The paper
describes a system of...

... the foregoing deficiencies by clustering a group of decision candidates
in the order of their **recognition**   **probabilities** , based upon a partial-
mask measurement set. These masks may differ from each **character** in the
alphabet to be **recognized** . An **identification** is made immediately from
this measurement set if certain first-level criteria are fulfilled. If no
positive **identification** can be made, or if a conflict exists, the
decision candidates are placed in an ordered **list** , and a second- level
measurement set is applied to the input pattern. The latter set...

... second partial-mask set. The individual measurements may be the same or
different for each **reference**   character . An **identification** of the
input **character** is then made at the second level if certain further
 recognition criteria are met.
  Descriptors: **character**   **recognition** equipment...

...optical **character**   **recognition**
  Identifiers: multilevel **character**   **recognition** ; ...

...electronic **image** ; ...
...partial mask comparison **standard** ; ...

... **recognition**   **probabilities** ; ...

... **identification** .

19/3,K/2   (Item 1 from file: 35)
DIALOG(R)File   35:Dissertation Abs Online

01296081 ORDER NO: AAD93-17319
·RECOGNITION **OF CURSIVE, DISCRETE AND MIXED** HANDWRITTEN   WORDS **USING**

CHARACTER , **LEXICAL AND SPATIAL CONSTRAINTS** (CHARACTER **CONSTRAINTS,**
LEXICAL CONSTRAINTS, WORD RECOGNITION)
  Author: FAVATA, JOHN T.
  Degree: PH.D.
  Year: 1993
  Corporate Source/Institution: STATE UNIVERSITY OF NEW YORK AT BUFFALO (
     0656)
  Source: VOLUME 54/02-B OF DISSERTATION ABSTRACTS INTERNATIONAL.
     PAGE 932. 227 PAGES

RECOGNITION **OF CURSIVE, DISCRETE AND MIXED** HANDWRITTEN WORDS **USING**
CHARACTER , **LEXICAL AND SPATIAL CONSTRAINTS** (CHARACTER **CONSTRAINTS,**
LEXICAL CONSTRAINTS, WORD RECOGNITION)

    This research formulates a computational **model** for off-line
handwritten word recognition , where a **word** can be any mixture of
discrete **characters** , cursive components or touching discrete **characters**
. A hypothesis generation and **ranking** (HG scR) paradigm is used as the
basis of a solution to the general **word recognition** problem. Three
levels of constraints: **character** , lexical and spatial, are utilized to
hypothesize and **rank word** interpretations. The first and most general
of the constraints are the **whole character** shapes embedded among the
word strokes . An orderly search of the **word** for embedded **characters**
produces many possible **word** interpretations. The number of
interpretations are reduced by applying the lexical level of constraint,
which consists of the **character** -to- **chara**cter transition rules of the
language. The remaining interpretations are ranked and reduced using inter-
character spatial **relationships** that pertain to the **relative**
character size. Surviving interpretations are **compared** to the **lexicon**
using string **matching** so as to **determine word** identity.
    The general **word recognition** problem is decomposed into three
subproblems, discrete, purely cursive and touching discrete, each with a HG
scR **recognition** algorithm. **Words** with discrete **characters** are
naturally segmented into isolated **characters** and **recognized** . Purely
cursive **words** are **recognized** by generating a series of segmentation
points on the **word** and searching for **characters** among the segmentation
points using a special **character recognizer** . Plausible interpretations
are generated and ranked using lexical and spatial constraints. **Words**
with touching discrete **characters** are **analyzed** by making a series of
word length hypotheses and segmenting the **word** under these hypotheses.
Hypotheses that yield high- **confidence characters** are retained as
possible interpretations of the **word** . A general control structure
combines these three modules into a general HG scR system which can
recognize any form of **handwritten word** . The control structure tries to
 determine the type of each **word** component and activates the appropriate
HG scR **recognition** module. In those cases where a clear **determination**
cannot be made, several HG scR modules will be activated to **analyze** the
component.

  19/3,K/3   (Item 1 from file: 1)

01045097 ERIC NO.: ED379965 CLEARINGHOUSE NO.: FL800897
Teaching Low-Level Adult ESL Learners. ERIC Digest.
  Holt, Grace Massey;
CORP. SOURCE: Adjunct ERIC Clearinghouse for ESL Literacy Education,
  Washington, DC. (BBB31499); National Clearinghouse for ESL Literacy

...to more challenging; building redundancy into the curriculum;
combining enabling skills with language experience and **whole** -language
approaches; combining life-skill reading competencies with phonics, **word
recognition** , **word** order, **word** spacing, reading **words** in context, and
reading comprehension; using cooperative/interactive learning activities;
and varying techniques for diverse...

...literacy level (low or beginning) adult ESL learners? This digest
provides information on how to **identify** and assess the instructional
needs of adults learning to become literate in a second language...

...missing letters. (familiarity with Roman alphabet)
2. Copy a sentence. (speed and ease in forming **words**)
3. Read two simple sentences. (basic sight vocabulary in context)
4. Point to letters corresponding...

...by the teacher. (simple consonant sounds not easily confused)
5. Read several unfamiliar or nonsense **words** . (blending sounds)

A learner who can **recognize** basic sight **words** or use a knowledge of
phonics to approximate the sounds of unfamiliar **words** probably does not
need basic literacy instruction.
"Assessing Through Writing."

The completion of a simple...

...date, social security number, birth date, birthplace, age, and gender is
a quick way to **determine** reading and writing ability, especially when a
large number of learners have to be assessed...

...basic literacy instruction.

A writing sample in the learner's first language is useful in **determining**
the literacy level of the learner in his or her native language.

A writing sample...

...Through Classroom Observation."

Informal assessment through classroom observation can continue to assist
the teacher in **determining** an individual learner's needs. Attention
should be paid to how learners hold their pencils...

...their books (upside down?), how they move their eyes (Do the eyes move
to follow **words** ?), how quickly they write (Do they hesitate? take time?
labor over each letter?), and how...

...Bell and Burnaby (1984), Holt (1988), Holt and Gaer (1993), and Wrigley
and Guth (1992) **list** techniques that involve beginning level learners as
active participants in selecting topics, language, and materials...
...from listening to speaking, reading, and writing skills. Move from
language experience activities to picture- **word** connections to all-print
exercises.
4. Build redundancy into curriculum content, providing repetition of topics

REFERENCES
Auerbach, E. (1992). "Making meaning, making change: Participatory curriculum development for adult...

...Studies in Education/Hodder and Stoughton.

California Department of Education. "English-as-a-second-language **model** standards for adult education programs." (1992). Sacramento, CA: Author.

Crystal, C. (Ed.). (1982). "Perspectives in...
...DESCRIPTORS: Educational Needs; *English (Second Language);
  *Instructional Materials; *Introductory Courses; Limited English Speaking
  ; *Literacy Education; Media **Selection** ; Needs Assessment; Second
  Language Instruction; *Student Centered Curriculum; Student
  Characteristics; Student Needs
?

7093137   INSPEC Abstract Number: C2001-12-1250B-030
   Title: **Multi-branch and two-pass HMM modeling approaches for off-line cursive** handwriting recognition
   Author(s): Wenwei Wang; Brakensiek, A.; Kosmala, A.; Rigoll, G.

   Author Affiliation: Dept. of Comput. Sci., Gerhard-Mercator-Univ., Dusiburg, Germany

   Title: **Multi-branch and two-pass HMM modeling approaches for off-line cursive** handwriting recognition

   Abstract: Because of large shape variations in human **handwriting**, cursive **handwriting recognition** remains a challenging task. Usually, the **recognition** performance depends crucially upon the pre-processing steps, e.g. the **word** baseline detection and **segmentation** process. Hidden Markov models (HMMs) have the ability to **model** similarities and variations among samples of a class. In this paper, we present a multi-branch...

   ... an HMM-based two-pass modeling approach. Whereas the multi-branch HMM method makes the **resulting** system more robust with **word** baseline detection, the two-pass **recognition** approach exploits the **segmentation** ability of the Viterbi algorithm and creates another HMM set and carries out a second **recognition** pass. The total performance is enhanced by the combination of the two **recognition** passes. Experiments **recognizing** cursive **handwritten words** with a 30,000-**word lexicon** have been carried out. The **results** demonstrate that our novel approaches achieve better **recognition** performance and reduce the **relative** error rate significantly.

   Descriptors: **handwriting recognition** ;
   ...Identifiers: off-line cursive **handwriting recognition** ; ...
... **word** baseline detection...

... **word segmentation** process...

... **similarity** modeling...

... **recognition** performance...

... **lexicon** ;

6957662   INSPEC Abstract Number: B2001-07-6135-197, C2001-07-5260B-346
  Title: An HMM based two-pass approach for off-line cursive handwriting recognition
  Author(s): Wenwei Wang; Brakensick, A.; Rigoll, G.
  Author Affiliation: Dept. of Comput. Sci., Duisburg Univ.; Germany
  Conference Title: Advances in Multimodal Interfaces-ICMI 2000. Third International Conference (Lecture Notes in Computer Science Vol.1948)   p. 386-93
  Editor(s): Tan, T.; Shi, Y.; Gao, W.
  Publisher: Springer Verlag, Berlin, Germany
  Publication Date: 2000   Country of Publication: Germany   xv+678 pp.
  ISBN: 3 540 41180 1   Material Identity Number: XX-2001-00248
  Conference Title: Advances in Multimodal Interfaces - ICMI 2000. Third International Conference. Proceedings
  Conference Date: 14-16 Oct. 2000   Conference Location: Beijing, China
  Language: English
  Subfile: B C
  Copyright 2001, IEE

  Title: An HMM based two-pass approach for off-line cursive handwriting recognition
  Abstract: Cursive **handwriting recognition** is a challenging task because the **recognition** system has to handle not only large shape variation of human **handwriting**, but also **character segmentation**. Usually the **recognition** performance depends crucially upon the **segmentation** process. Hidden Markov models (HMMs) have the ability to **model similarity** and variation among samples of a class. The authors present an extended sliding window feature...

... and an HMM based two-pass modeling approach. Whereas our feature extraction method makes the **resulting** system more robust with **word** baseline detection, the two-pass **recognition** approach exploits the **segmentation** ability of the Viterbi algorithm and creates another HMM set and carries out a second pass **recognition**. The total performance is enhanced by a combination of the two pass **results**. Experiments for **recognizing** cursive **handwritten words** with a 30000 **word lexicon** have been carried out and show that our novel approach can achieve better **recognition** performance and reduce the **relative** error rate significantly.
    ...Descriptors: **handwriting recognition** ; ...

... **handwritten character recognition** ; ...
... **image segmentation** ; ...

... **word** processing.
    ...Identifiers: offline cursive **handwriting recognition** ; ...

... **recognition** system...

...human **handwriting** ; ...

... **character segmentation** ; ...

... **recognition** performance...

... **segmentation** process...

... **word** baseline detection...

...two-pass **recognition** approach...

... **segmentation** ability...

:...second pass **recognition** ; ...
...cursive **handwritten** **words** ; ...

... **lexicon** ;

26/3,K/3   (Item 3 from file: 2)
DIALOG(R)File   2:INSPEC
(c) 2003 Institution of Electrical Engineers. All rts. reserv.

 Title: Recognition **of handprinted and cursive** words **by finding feature correspondences**

  Abstract: The paper describes a method for offline **recognition** of handprinted and cursive **words** . The module takes as input a binary **word image** and a **lexicon** of strings, and ranks the **lexicon** according to the **likelihood** of **match** to the given **word image** . The use of a **lexicon** allows the method to succeed despite difficulties which can be caused by poorly formed or ambiguous **characters** . To perform **recognition** , a set of **character** models is used. The models employ a graph representation. Each **character model** consists of a set of features in spatial relationship to one another. The features are based on samples of morphological features from a set of training **images** . The **character** models are automatically built in a clustering process. **Character** merging is performed by finding the appropriate correspondences between pairs of **character** sample features. This is accomplished by finding a solution to the assignment problem, which is an $O(n/sup\ 3/)$ linear programming algorithm. The end **result** of the training process is a set of random graph **character** prototypes for each **character** class. Because it is not possible to clearly **segment** the **word image** into **characters** before **recognition** , **segmentation** and **recognition** are bound together in a dynamic programming process. **Results** are presented for a set of **word images** extracted from mailpieces in the live mailstream.
  Descriptors: **character recognition** ; ...

... **image recognition** ; ...

... **word** processing
  Identifiers: cursive **words** ; ...

...offline **recognition** ; ...

...binary **word** **image** ; ...

... **lexicon** ; ...

...ambiguous **characters** ; ...

... **character** models...

...handprinted **word** **recognition** ; ...

...training **images** ; ...

... **character** merging...

...random graph **character** prototypes...

... **word** **images** ;

26/3,K/4   (Item 4 from file: 2)
DIALOG(R)File   2:INSPEC

4438833   INSPEC Abstract Number: C9308-1250B-009
   Title: Recognition   **of poorly printed text by direct extraction of
features from gray scale**
   Author(s): Pavlidis, T.; Wang, L.; Zhou, J.; Sakoda, W.J.; Rocha, J.
   Author Affiliation: Image Anal. Lab., State Univ. of New York, Stony
Brook, NY, USA
   Journal: Proceedings of the SPIE - The International Society for Optical
Engineering   vol.1661   p.118-26
   Publication Date: 1992 Country of Publication: USA
   CODEN: PSISDG ISSN: 0277-786X
   U.S. Copyright Clearance Center Code: 0 8194 0815 8/92/$4.00
   Conference Title: Machine Vision Applications in Character Recognition
and Industrial Inspection
   Conference Sponsor: SPIE; Soc. Imaging Sci. Technol
   Conference Date: 10-12 Feb. 1992   Conference Location: San Jose, CA,
USA
   Language: English
   Subfile: C

   Title: Recognition   **of poorly printed text by direct extraction of
features from gray scale**
   Abstract: Omnifont optical **character** **recognition** proceeds by
computing features on the input **image** and then classifying the **image** .
Past omnifont optical **character** **recognition** techniques that use
features have always binarized the **image** by comparing the brightness of
an input pixel with a **threshold** level and then labeling it as 'black' or
'white' and then computing the features for each **character** . However for
poorly printed text such binarization **results** into broken or merged
characters and consequently incorrect features. The authors propose a
method for the direct computation of geometrical features, such as **strokes**
, directly from the gray scale **image** . To this end they use a **model** of
the **image** forming process, namely the convolution of the original binary
image with the point spread function (PSF) of the digitizer. They also
estimate how printing distortions and noise affect the **result** so that

they can deduce how different **parts** of a printed **character** should appear under those conditions. Detected features are then clustered for each set of samples of the training set. The clustering guides the **selection** of prototypes and the final classification is made by graph **matching** between prototypes and new (unknown) **characters** .
Descriptors: optical **character** **recognition**
...Identifiers: gray scale **images** ; ...

... **image** classification...
... **prototype** **selection** ; ...

...optical **character** **recognition** ; ...

... **image** forming process

26/3,K/5 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)
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03593439 E.I. Monthly No: EIM9304-024208
Title: Offline recognition **of** handwritten **cursive** words .
Author: Favata, John T.; Srihari, Sargur N.
Corporate Source: SUNY/Buffalo, Buffalo, NY, USA
Conference Title: Machine Vision Applications in Character Recognition and Industrial Inspection
Conference Location: San Jose, CA, USA Conference Date: 19920210
E.I. Conference No.: 17779
Source: Proceedings of SPIE - The International Society for Optical Engineering v 1661. Publ by Int Soc for Optical Engineering, Bellingham, WA, USA. p 224-234
Publication Year: 1992
CODEN: PSISDG ISSN: 0277-786X ISBN: 0-8194-0815-8
Language: English

Title: Offline recognition **of** handwritten **cursive** words .
Abstract: A robust algorithm for offline cursive script **recognition** is described. The algorithm uses a generate-and-test paradigm to **analyze** cursive **word** **images** . The generate phase of the algorithm intelligently **segments** the **word** after **analyzing** certain structural features present in the **word** . The test phase **determines** the most likely **character** candidates among the **segmentation** points by using a **recognition** algorithm trained on generalized cursive letter shapes. In a sense, **word** **recognition** is done by sliding a variable sized window across the **word** looking for **recognizable** **characters** and **strokes** . The **output** of this system is a **list** of all plausible interpretations of the **word** . This **list** is then **analyzed** by a two-step contextual post- processor which first matches all of the interpretations to a supplied **dictionary** using a string matching algorithm. This eliminates the least likely interpretations. The remaining candidates are then **analyzed** for certain **character** spatial **relationships** (local **reference** line finder) to finally **rank** the **dictionary** . The system has the advantage of not requiring explicit **word** training yet is able to **recognize** many **handwriting** styles. This system is being successfully tested on a database of **handwritten** **words** extracted from live mail with **dictionary** sizes of up to 300 **words** . Planned extensions include developing a multilevel generate-and-test paradigm which can handle any type of **handwritten** **word** . 34 refs.
Descriptors: **CHARACTER** **RECOGNITION** ; **IMAGE** **ANALYSIS** ; DATABASE

SYSTEMS; ALGORITHMS; GRAPH THEORY
   Identifiers: **HANDWRITTEN** CURSIVE **WORDS   RECOGNITION** ; OFFLINE CURSIVE
SCRIPT **RECOGNITION** ; VARIABLE-SIZE WINDOW; TWO-STEP CONTEXTUAL
POST-PROCESSOR; STRING MATCHING ALGORITHM; GENERATE-AND-TEST PARADIGM

26/3,K/6   (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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Title: An HMM based two-pass approach for off-line cursive handwriting
     recognition
Author(s): Wang WW (REPRINT) ; Brakensiek A; Rigoll G
Corporate Source: Gerhard Mercator Univ Duisburg,Dept Comp Sci, Fac Elect
     Engn,Bismarckstr 90/D-47057 Duisburg//Germany/ (REPRINT); Gerhard
     Mercator Univ Duisburg,Dept Comp Sci, Fac Elect Engn,D-47057
     Duisburg//Germany/

Title: An HMM based two-pass approach for off-line cursive handwriting
     recognition
Abstract: The cursive **handwriting   recognition** is a challenging task
     because the **recognition** system has to handle not only large shape
     variation of human **handwriting** , but also **character   segmentation** .
     Usually the **recognition** performance depends crucially upon the
     segmentation process. Hidden Markov Models (HMMs) have the ability to
     model   similarity and variation among samples of a class. In this
     paper we present an extended sliding...

...and an HMM based two-pass modeling approach. Whereas our feature
     extraction method makes the **resulting** system more robust with **word**
     baseline detection, the two-pass **recognition** approach exploits the
     segmentation ability of the Viterbi Algorithm and creates another HMM
     set and carries out a second pass **recognition** . The total performance
     is enhanced by combination of the two pass **results** . Experiments of
     recognizing cursive **handwritten   words** with 30000 **words   lexicon**
     have been carried out and show that our novel approach can achieve
     better **recognition** performance and reduce the. **relative** error rate
     significantly.

26/3,K/7   (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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Title: Shape quantization and recognition **with randomized trees**
Author(s): Amit Y (REPRINT) ; Geman D
Corporate Source: UNIV CHICAGO,DEPT STAT/CHICAGO//IL/60637 (REPRINT); UNIV
     MASSACHUSETTS,DEPT MATH & STAT/AMHERST//MA/01003

Title: Shape quantization and recognition **with randomized trees**

Abstract: We explore a new approach to shape **recognition** based on a
virtually infinite family of binary features (queries) of the **image**
data, designed to accommodate prior information about shape invariance
and regularity. Each query corresponds to...

...increasing structure and complexity; semi-invariance, meaning that most
shapes of a given class will **answer** the same way to two queries that
are successive in the ordering; and stability, since...

...classifier based on the full feature set can be evaluated, and it is
impossible to **determine** a priori which arrangements are informative.
Our approach is to select informative features and build...

...on the branch that is traversed. Due to the number and nature of the
queries, **standard** decision tree construction based on a fixed-length
feature vector is not feasible. Instead we...

...terminal nodes are labeled by estimates of the corresponding posterior
distribution over shape classes. An **image** is classified by sending it
down every tree and aggregating the **resulting** distributions.

The method is applied to classifying **handwritten** digits and
synthetic linear and nonlinear deformations of three hundred LAT(E)X
symbols. State...

...of digits. The principal goal of the experiments on LAT(E)X symbols is
to **analyze** invariance, generalization error and **related** issues, and
a comparison with artificial neural networks methods is presented in
this context.
...Identifiers--NEURAL NETWORKS; **CHARACTER - RECOGNITION** ; NEOCOGNITRON;
CLASSIFIERS; RESPONSES; POSITION
Research Fronts: 95-0847 003 (GIBBS SAMPLING; COMPUTER VISION; BAYESIAN-
ANALYSIS OF 2 OVERDISPERSED POISSON MODELS; ANNEALING MARKOV-CHAIN
MONTE-CARLO; OBJECT POSE; MACHINE **RECOGNITION**)
95-3282 002 (MACHINE LEARNING; INDUCTION OF FUZZY DECISION TREES;
GENETIC ALGORITHMS; CLASSIFIER CONSTRUCTION; BIAS **SELECTION** ;
AUTOMATED KNOWLEDGE ACQUISITION)
95-0403 001 (SAMPLE COMPLEXITY OF WEAK LEARNING; VAPNIK-CHERVONENKIS
DIMENSION; VACILLATORY FUNCTION **IDENTIFICATION**)
95-2306 001 (HAZARD REGRESSION; MAXIMUM- **LIKELIHOOD** NEURAL-NETWORK
PREDICTION MODELS; NONPARAMETRIC ROBUST LATENT-STRUCTURE DECOMPOSITION
METHOD)
95-7208 001 (**RECOGNITION** OF UNCONSTRAINED **HANDWRITTEN** NUMERALS;
MULTIPLE CLASSIFIERS; MACHINE PRINTED **CHARACTER** **SEGMENTATION**)

26/3,K/8 (Item 3 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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05759727 Genuine Article#: WW122 No. References: 28
Title: A lexicon **driven approach to** handwritten word recognition
for real-time applications
Author(s): Kim G (REPRINT) ; Govindaraju V
Corporate Source: SUNY BUFFALO,DEPT COMP SCI, CEDAR, 520 LEE
ENTRANCE/AMHERST//NY/14228 (REPRINT)
Journal: IEEE TRANSACTIONS ON PATTERN ANALYSIS AND MACHINE INTELLIGENCE,
1997, V19, N4 (APR), P366-379

Title: A lexicon **driven approach to** handwritten word recognition
    for real-time applications

Abstract: A fast method of **handwritten word recognition** suitable for
    real time applications is presented in this paper. Preprocessing,
    segmentation and feature extraction are implemented using a chain code
    representation of the **word** contour. Dynamic **matching** between
    characters of a **lexicon** entry and **segment** (s) of the input **word
    image** is used to **rank** the **lexicon** entries in order of best **match**
    . Variable duration for each **character** is defined and used during the
    matching. Experimental **results** prove that our approach using the
    variable duration outperforms the method using fixed duration in terms
    of both accuracy and speed. Speed of the entire **recognition** process
    is about 200 msec on a single SPARC-IO platform and the **recognition**
    accuracy is 96.8 percent are achieved for **lexicon** size of 10, on a
    database of postal **words** captured at 212 dpi.
...Identifiers--HIDDEN MARKOV **MODEL** ; ALGORITHM; NETWORK; SEARCH
Research Fronts: 95-7589 001   (SPEECH **RECOGNITION** ; NATURAL-LANGUAGE
    UNDERSTANDING; TECHNOLOGY SUPPORTS DICTATION)

26/3,K/9   (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
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...Abstract: prior knowledge in the learning process. Purely nativist
    approaches, such as the Principles and Parameters **model** , build
    parameterized linguistic generalizations directly into the learning
    system. Purely empirical approaches use a general...

...as finite-state transducers that accept underlying forms as input and
    generate surface forms as **output** . We show that OSTIA, a
    general-purpose transducer induction algorithm, was incapable of
    learning simple...
...phonology, and that are assumed explicitly or implicitly by every theory
    of phonology: faithfulness (underlying **segments** tend to be realized
    similarly on the surface), community (**similar segments** behave
    similarly), and context (phonological rules need access to variables
    in their context). These biases are so...

...from English and German. Furthermore, we show that someof the remaining
    errors in our augmented **model** are dire to implicit biasesin the
    traditional SPE-style rewrite system that are not **similarly**
    represented in the transducer formalism, suggesting that while

transducers may be formally equivalent to SPE...

...very simple SPE-style rules, and to a non-psychologically-motivated and nonprobabilistic theory ofpurely **deterministic** transducers, we do not expect that our **model** as implemented has any practical use as a phonological learning device, nor is it intended as a cognitive **model** of human learning. Indeed, because of the noise and nondeterminism inherent to linguistic data, we...

...algorithms for language induction are much more likely to be a fruitful research direction. Our **model** is rather intended to suggest the kind of biases that may be added to other...

...which they may be added, in order to build a cognitively and computationally plausible learning **model** for phonological rules.

...Research Fronts: 95-3282 001 (MACHINE LEARNING; INDUCTION OF FUZZY DECISION TREES; GENETIC ALGORITHMS; CLASSIFIER CONSTRUCTION; BIAS **SELECTION** ; AUTOMATED KNOWLEDGE ACQUISITION)

  95-7627 001 (APPROXIMATE REGULAR EXPRESSION **MATCHING** ; EDIT DISTANCE; **HAND - WRITTEN WORD RECOGNITION** ; STRING ALIGNMENT)

26/3,K/10   (Item 5 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci
(c) 2003 Inst for Sci Info. All rts. reserv.

03860825   Genuine Article#: QM257   No. References: 33
Title: HANDPRINTED WORD RECOGNITION **ON A NIST DATA SET**
Author(s): GADER P; WHALEN M; GANZBERGER M; HEPP D
Corporate Source: UNIV MISSOURI,DEPT ELECT & COMP ENGN/COLUMBIA//MO/65211; CYBERNET SYST INC/ANN ARBOR//MI/48105; ENVIRONM RES INST MICHIGAN/ANN ARBOR//MI/48105
Journal: MACHINE VISION AND APPLICATIONS, 1995, V8, N1, P31-40
ISSN: 0932-8092
Language: ENGLISH   Document Type: ARTICLE   (Abstract Available)

Title: HANDPRINTED WORD RECOGNITION **ON A NIST DATA SET**
Abstract: An approach to handprinted **word recognition** is described. The approach is based on the use of generating multiple possible **segmentations** of a **word image** into **characters** and **matching** these **segmentations** to a **lexicon** of candidate strings. The **segmentation** process uses a combination of connected component **analysis** and distance transform-based, connected **character0** splitting. Neural networks are used to assign **character confidence** values to potential **character** within **word images** . Experimental **results** are provided for both **character** and **word recognition** modules on data extracted from the NIST handprinted **character** database.
Research Fronts: 93-1434 001 (**MODEL** -BASED OBJECT **RECOGNITION** ; PERCEPTUAL ORGANIZATION IN COMPUTER VISION; MONOCULAR **IMAGE** FEATURES)

  93-7282 001 (HIDDEN MARKOV-MODELS; SPEECH **RECOGNITION** ; DIGITAL CHANNELS)

26/3,K/11   (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online
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01730923   ORDER NO: AADAA-I9958297
Hierarchical character recognition **and its use in** handwritten word /phrase recognition

Hierarchical character recognition **and its use in** handwritten word
/phrase recognition

     Off-line **handwritten** **word** /phrase **recognition** systems generally
have monotonically cascaded architecture in these architectures, the
recognition engine follows a static **model** with a fixed feature space.
Built-in resources are exhaustively used at each stage of...

...autonomous adaptation to input is one of the solutions to the goal.
     A recursive computational **model** for **handwritten** **character / word**
/phrase **recognition** that has some **similarities** to the human cognitive
approach is proposed. Two concepts, (i) altering **recognition** action
using feedback and (ii) evaluating and regulating terminating
conditions actively, are introduced for dynamic and interactive
recognition . A hierarchical classification method is presented with
dynamic usage of hierarchical feature space that preserves the benefits of
the multi-resolution **model** . A **lexicon** -driven **word** recognizer which
operates dynamically and has different degrees of classification ability is
also presented. A concept of **lexicon** complexity derived from
"matching transform distance" is utilized as a decision metric,
which measures the difficulty of the given **lexicon** set with respect to
the classification ability of the **character** **recognizer** .
     Recognition , decision making and recursive updating from the closed
loop architecture is designed for a recursive **recognition** scenario. This
proposed **model** recursively enhances the degree of classification until
decision conditions are satisfied. A prune **stroke** **analysis** which
detects the writer's spacing style is formulated to extend **word**
recognition to phrase **recognition** system. The prime **stroke** period is
used as a metric to limit the combination of **strokes** for **word**
recognition and to generate phrase hypotheses. The proposed models achieve
98% and 96% of top choice correct rates in **character** and **word**
recognition performance tested on NIST digit set and city name **word**
images collected from the USPS mail stream respectively, Application of
our phrase **recognition** to the **recognition** of street lines in USPS mail
pieces **resulted** in a 100% improvement **comparing** to the performance of
a **word** mode **recognition** .

...Africa. A 1924 collection, made by anthropologist Martha Warren Beckwith, establishes that Jamaican narratives share **characters**, themes, and specific plots with narratives in African collections. No study has been made of them as an art form, however. This dissertation seeks to **determine** if contemporary performers of Jamaican oral narratives of African heritage use the same patterns and...

...transcription, using a script developed by Frederic Cassidy, to permit accuracy in patois pronunciation. A **selection** of thirty-two narratives collected during field work is included in the dissertation. The first **section** of the dissertation discusses this field work, transcription, previous collections, and general oral tradition of which the narratives are a **part**. A survey of songs, rhymes, riddles, proverbs, and different genre of narrative indicates how trickster...

...The specific methodology applied to trickster and non-trickster narrative performances is based on a **model** Harold Scheub developed during work on African oral narratives. His methodology and that of structuralist scholars who contributed to it are discussed in the second **section**. Experiences of individual Jamaican performers in developing their skills are combined with a theoretical discussion...

...The raw material with which a performer works includes essentially verbally, vocally, and nonverbally evoked **images** which are organized into patterns through rhythmic repetition. By placing **images** in these patterns, the performer enables the audience to compare them, a process which sometimes **results** in metaphor. In simpler trickster narratives, devices such as expansible **images** or patterned **image**-sets are used, juxtaposing **images** which are very **similar**. In more complex narratives, parallel **image**-sets are introduced, in which different **images** are juxtaposed. When synthesized, they become metaphorical, revealing one common underlying idea. The metaphoric process...
...and non-trickster narrative has a central song or saying forming the core of an **image**. Rhythmic repetition is essential to all oral narrative performance, since all narrative structures share a basic comparative process, though only the most complex culminate in metaphor. Expansible **images**, patterned **image**-sets, and parallel **image**-sets are found to be common to both African and Jamaican oral narratives. Application of Scheub's methodology to Jamaican oral narratives, and **comparative analysis** of Jamaican and African narratives demonstrate that Jamaican narratives survive in much the same form...

26/3,K/13   (Item 1 from file: 1)
DIALOG(R)File   1:ERIC
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01115589 ERIC NO.: ED459972 CLEARINGHOUSE NO.: RC023265
Teaching Reading to American Indian/Alaska Native Students. ERIC Digest.
  Reyhner, Jon;
CORP. SOURCE: ERIC Clearinghouse on Rural Education and Small Schools,
  Charleston, WV. (BBB26671)
  4pp.
  December 2001 (20011200)
SPONSORING AGENCY: Office of Educational Research and Improvement (ED),
  Washington, DC. (EDD00036)

...each with its own set of claims and counter-claims. Phonics approaches are designed for **standard** English speakers, and students with limited English abilities end up parroting what they read without...

Fox (2000) asserts that "reading to...

...s language abilities by providing them many opportunities to have new experiences, to learn new **words** , and to practice oral language in English and in their Native language (p. 1).

Finally...

...bilingual approach. Clevedon, UK: Multilingual Matters.

Franks, M. E. (1988, November). Using the gap reduction **model** to evaluate a successful bilingual/ESL program. Paper presented at the Annual Meeting of the the **image** of the child in American Indian classrooms. Language Arts, 70(3), 182-92.

McQuillan, J...
...DESCRIPTORS: Relevant Education; Elementary Education; Language Experience Approach; Limited English Speaking; Phonics; *Reading Instruction; Reading Material **Selection** ; *Reading Strategies; Whole Language Approach

 26/3,K/14   (Item 2 from file: 1)
DIALOG(R)File   1:ERIC
(c) format only 2003 The Dialog Corporation. All rts. reserv.

01106662 ERIC NO.: ED457763 CLEARINGHOUSE NO.: HE034418
Understanding and Facilitating Change in Higher Education in the 21st Century. ERIC Digest.
  Kezar, Adrianna;
CORP. SOURCE: George Washington Univ., Washington, DC. Graduate School of Education and Human Development. (BBB32577); ERIC Clearinghouse on Higher Education, Washington, DC. (BBB15669)
  4pp.
  2001 (20010000)
NOTES: Based on the ASHE-ERIC report of the same name published by Jossey-Bass Publishers. Contains small print.
SPONSORING AGENCY: Office of Educational Research and Improvement (ED), Washington, DC. (EDD00036)

  ...theories of change. For example, cultural and social-cognition theories of change would replace the **word** observation with the **word** perception in the second definition above. Theorists exploring change through a cultural or social-cognition...

...1996. As these scholars studied change, these concepts became critical points of concern in their **analyses** . Forces and sources examine the why of change. First and second/second order, scale, foci...

...unplanned refer to the how of change. Last, the target of change refers to the **outcomes** . As a campus begins to engage in a change process, members of the organization need...

...evolutionary, (2) teleological, (3) life cycle, (4) dialectical, (5) social cognition, and (6) cultural. Each **model** has a distinct set of assumptions about why change occurs, how the process unfolds, when change occurs and how long it takes, and the **outcomes** of change. The main assumption underlying evolutionary theories is that change is a response to
...

...organizational maturity, and organizational decline (Levy and Merry, 1986). Change is conceptualized as a natural **part** of human or organizational development. Dialectical models, also referred to as political models, characterize change as the **result** of clashing ideology or belief systems (Morgan, 1986). Conflict is seen as an inherent attribute ...

...necessary to develop a distinctive approach to change within higher education: overlooking these factors may **result** in mistakes in **analysis** and strategy, and using concepts foreign to the values of the academy will most likely...

...the very people who must bring about the change. In order to develop a distinctive **model**, the following unique features of higher education institutions need to be taken into account: *Interdependent...

...anarchical decision-making *Professional and administrative values *Shared governance *Employee commitment and tenure *Goal ambiguity * **Image** and success. Although not an exhaustive **list**, this represents some of the key features of higher education institutions that affect organizational change...create and reproduce the history and values, the stable nature of employment, the strong organizational **identification** of members, the emphasis on values, and the multiple organizational cultures. Because there are no bottom-line measures for examining performance in higher education, **image** and **identification** are extremely important in understanding if change is occurring and how it occurs. The **relationships** of **image** and **identification** to change seem to indicate that social cognition is important to understand. Furthermore, the loosely...

...accretion, that appear important to understanding change. Life-cycle models have not, for the most **part**, been applied to higher education institutions, but show promise for helping to develop explanations of...

...a disorderly process
* Facilitate shared governance and collective decision-making
* Articulate core characteristics
* Focus on **image**
* Connect the change process to individual and institutional identity
* Create a culture of risk and...

...balance of internal and external forces, and is open to creativity and leveraging change through **chance** occurrences.

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Birnbaum, R. (1991). How colleges work: The cybernetics of academic organization and leadership...

...A., Merry, U. (1986). Organizational transformation: Approaches, strategies, theories. New York: Praeger.

Morgan, G. (1986). **Images** of organization. Newbury Park, CA.: Sage Publications.
Rajagopalan, N. & Spreitzer, G.M. (1996). Toward a...

34/3,K/1   (Item 1 from file: 2)
DIALOG(R)File   2:INSPEC

6566236   INSPEC Abstract Number: C2000-05-7185-005
  Title: The **AddressScript/sup TM/** recognition **system for** handwritten
  envelopes
  Author(s): **Filatov, A.** ; Nikitin, V.; Volgunin, A.; Zelinsky, P.
  Author Affiliation: ParaScript, Niwot, CO, USA
  Conference Title: Document Analysis Systems: Theory and Practice. Third
IAPR Workshop, DAS'98. Selected Papers (Lecture Notes in Computer Science
Vol.1655)   p.157-71
  Editor(s): Lee, S.-W.; Nakano, Y.
  Publisher: Springer-Verlag, Berlin, Germany
  Publication Date: 1999 Country of Publication: Germany   xi+377 pp.
  ISBN: 3 540 66507 2   Material Identity Number: XX-1999-02853
  Conference Title: Document Analysis Systems: Theory and Practice. Third
IAPR Workshop, DAS'98. Selected Papers
  Conference Date: 4-6 Nov. 1998   Conference Location: Nagono, Japan
  Language: English
  Subfile: C
· Copyright 2000, IEE

  Title: The **AddressScript/sup TM/** recognition **system for** handwritten
  envelopes
  Author(s): **Filatov, A.** ; Nikitin, V.; Volgunin, A.; Zelinsky, P.
  Abstract: The paper presents AddressScript, a system for **handwritten**
postal address **recognition** for US mail. Key aspects of AddressScript
technology, such as system control flow, cursive **handwriting   recognition**
, and postal database are described. Special attention is paid to the
powerful character **recognizer** and the intensive usage of context, which
becomes available during the **recognition** process. The algorithm of
confidence level calculation is presented. Laboratory test results on a
blind test set of 50000 **images** of live **handwritten** mail pieces
demonstrate a 64% finalization rate for error rates below USPS
restrictions.
  Descriptors: **handwriting   recognition** ; ...

... **handwritten** character **recognition** ; ...

...text **analysis**
  Identifiers: AddressScript **recognition** system...

... **handwritten** envelopes...

... **handwritten** postal address **recognition** ; ...
...cursive **handwriting   recognition** ; ...

...character **recognizer** ; ...

... **recognition** process...

...live **handwritten** mail pieces

34/3,K/2   (Item 2 from file: 2)
DIALOG(R)File   2:INSPEC

5707084   INSPEC Abstract Number: C9711-7120-020

Title: Check amount recognition **based on the cross validation of**
courtesy and legal amount fields
Author(s): Dzuba, G.; **Filatov, A.** ; Gershuny, D.; **Kil, I.** ; Nikitin, V.
Author Affiliation: ParaScript, Boulder, CO, USA
Journal: International Journal of Pattern Recognition and Artificial
Intelligence vol.11, no.4 p.639-55
Publisher: World Scientific,
Publication Date: June 1997 Country of Publication: Singapore
CODEN: IJPIEI ISSN: 0218-0014
SICI: 0218-0014(199706)11:4L.639:CARB;1-E
Material Identity Number: M543-97007
Language: English
Subfile: C
Copyright 1997, IEE

Abstract: Describes an OCR system that **recognizes** amounts on American
personal checks. Special attention is paid to a reliable procedure to
reject doubtful cases. The legal (worded) amount is **recognized** along with
the courtesy (digit) amount. For both amount fields, a brief description of
all **recognition** stages, from field extraction to **recognition** itself,
are presented. We also explain problems at each stage and their possible
solutions. The numeral **recognizer** is based on the procedure of matching
input subgraphs to graphs of symbol prototypes. The **handwriting**
recognizer uses the most stable **handwriting** elements. It is shown that
the conditional probability of correctness is an optimal confidence level
...

... special cases are described. The sophisticated algorithm of cross
validation between legal and courtesy amount **recognition** results based on
the optimal confidence level approach is proposed. Experimental results on
real checks are presented. The **recognition** rate at 1% error rate is 67%.
The **recognition** rate without reject is 85%. Significant improvement is
achieved due to legal amount processing in spite of a relatively low
recognition rate for this field.
...Descriptors: optical character **recognition** ;
Identifiers: check amount **recognition** ; ...

...numeral **recognizer** ;

34/3,K/3 (Item 3 from file: 2)
DIALOG(R)File 2:INSPEC
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5704685 INSPEC Abstract Number: C9711-5260B-142
Title: Handwritten **ZIP code** recognition
Author(s): Dzuba, G.; **Filatov, A.** ; Volgunin, A.
Author Affiliation: Parascript, Boulder, CO, USA
Conference Title: Proceedings of the Fourth International Conference on
Document Analysis and Recognition (Cat. No.97TB100138) Part vol.2 .p.
766-70 vol.2
Publisher: IEEE Comput. Soc, Los Alamitos, CA, USA
Publication Date: 1997 Country of Publication: USA 2 vol. xxiv+1119
pp.
ISBN: 0 8186 7898 4 Material Identity Number: XX97-02265
U.S. Copyright Clearance Center Code: 0 8186 7898 4/97/$10.00
Conference Title: Proceedings of the Fourth International Conference on

Document Analysis and Recognition
   Conference Sponsor: Int. Assoc. Pattern Recognition (IAPR), TC 10 & 11;
Int. Graphonomics Soc. (IGS); German Assoc. Comput. Sci. (GI); German
Assoc. Inf. Technol. (ITG)
   Conference Date: 18-20 Aug. 1997   Conference Location: Ulm, Germany
   Language: English
   Subfile: C
   Copyright 1997, IEE
 Title: Handwritten **ZIP code** recognition
   Author(s): Dzuba, G.; **Filatov, A.** ; Volgunin, A.
   Abstract: The encoding of delivery point code (DPC) for a **handwritten**
address is one of the most complex problems of the US mail.delivery
automation. This paper describes a real-time system intended to **recognize**
the 5-digit ZIP code part of DPC. To increase the system performance the
results of ZIP code **recognition** are cross-validated with those of city
and state name **recognition** . The main principles of the **handwritten** word
 recognizer which provide the core of the system are explained. The system
throughput is 40,000 address blocks per hour. Experimental results on live
mail pieces are presented. The ZIP code **recognition** rate is 73% with 1%
error rate.
   Descriptors: document **image** processing...

   ... **handwriting** **recognition** ; ...

   ...optical character **recognition** ;
   Identifiers: **handwritten** ZIP code **recognition** ; ...

   ... **handwritten** address...

   ...state name **recognition** ; ...
   ...city name **recognition** ; ...

   ... **handwritten** word **recognizer** ;

   34/3,K/4   (Item 4 from file: 2)
   DIALOG(R)File   2:INSPEC
   (c) 2003 Institution of Electrical Engineers. All rts. reserv.

   5630559   INSPEC Abstract Number: C9708-5260B-283
   Title: Graph-based ·handwritten **digit string** recognition
     Author(s): **Filatov, A.** ; Gitis, A.; **Kil, I.**
     Author Affiliation: Offline Recognition Dept., Paragraph Int., Sunnyvale,
CA, USA
     Conference Title: Proceedings of the Third International Conference on
Document Analysis and Recognition   Part vol.2   p.845-8 vol.2
     Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
     Publication Date: 1995 Country of Publication: USA   2 vol. xxvi+1188
pp.
     ISBN: 0 8186 7128 9   Material Identity Number: XX97-01463
     U.S. Copyright Clearance Center Code: 0 8186 7128 9/95/$4.00
     Conference Title: Proceedings of 3rd International Conference on Document
Analysis and Recognition
     Conference Sponsor: IAPR TC-11, TC-10; Canadian Image Process. & Pattern
Recognition Soc.; Centre for Pattern Recognition & Machine Intelligence;
IEEE, Sect. Montreal; Lab. Scribens; Int. Graphonomics Soc.; Centre de res.
inf. Montreal; Inst. Robotics & Intelligence Syst
     Conference Date: 14-16 Aug. 1995   Conference Location: Montreal, Que.,
Canada
     Language: English

Title: **Graph-based** handwritten **digit string** recognition
Author(s): **Filatov, A.** ; Gitis, A.; **Kil, I.**

Abstract: The article presents a **handwritten** digit string **recognition** algorithm based on matching input subgraphs with prototype symbol graphs. The article defines a set of acceptable graph transformations corresponding to typical variations of the **handwritten** symbols. The search for a match between the input subgraph and prototype graph is conducted using this set of transformations. This approach allows us to solve the problems of structure **recognition** methods caused by a high variability of **handwritten** symbol topology. The article presents experimental results of the **handwritten** digit string **recognition** system.
...Descriptors: **handwriting recognition** ;
Identifiers: graph based **handwritten** digit string **recognition** ; ...

... **handwritten** digit string **recognition** algorithm...

... **handwritten** symbols...

...structure **recognition** methods...
... **handwritten** symbol topology...

... **handwritten** digit string **recognition** system

34/3,K/5   (Item 5 from file: 2)
DIALOG(R)File   2:INSPEC

00563184   INSPEC Abstract Number: A73062065, B73036060, C73021286
Title: **Calculating the parameters of an apparatus that automatically focuses an objective in terms of the relative divergence of autocollimation** images **of a line**
Author(s): Dnisyuk, G.V.; **Seregin, A.G.**
Journal: Optiko-Mekhanicheskaya Promyshlennost   vol.39, no.11   p. 23-25
Publication Date: Nov. 1972 Country of Publication: USSR
CODEN: OPMPAQ ISSN: 0030-4042
Translated in: Soviet Journal of Optical Technology   vol.39, no.11   p. 678-80
Country of Publication: USA
CODEN: SJOTBH   ISSN: 0038-5514
Language: English
Subfile: A

...Title: **an apparatus that automatically focuses an objective in terms of the relative divergence of autocollimation** images **of a line**
Author(s): Dnisyuk, G.V.; **Seregin, A.G.**
Abstract: **Analytic** functions are obtained that make it possible to **determine** the optimum relations for the basic parameters of an automatic focusing apparatus.
...Descriptors: optical **images**
Identifiers: relative **image** divergence...

...autocollimation line **images** ;

34/3,K/6   (Item 1 from file: 65)

03761698   INSIDE CONFERENCE ITEM ID: CN039547259
 Handwritten **Word** Recognition **-The Approach Proved by Practice**
  Dzuba, G.; **Filatov, A.** ; Gershuny, D.; **Kil, I.**
  CONFERENCE: Frontiers in handwriting recognition-International workshop;
    6th
  SERIES IN MACHINE PERCEPTION AND ARTIFICIAL INTELLIGENCE, 1999; VOL 34
  P: 153-162
  World Scientific, 1999
  ISBN: 9810237154
  LANGUAGE: English DOCUMENT TYPE: Conference Selected papers
    CONFERENCE EDITOR(S): Lee, S.-W.
    CONFERENCE LOCATION: Taejon, Korea 1998; Aug (199808) (199808)
  NOTE:
    Also known as IWFHR'98

 Handwritten **Word** Recognition **-The Approach Proved by Practice**
  Dzuba, G.; **Filatov, A.** ; Gershuny, D.; **Kil, I.**
  DESCRIPTORS: IWFHR; **handwriting   recognition** ; **handwriting**

File 348:EUROPEAN PATENTS 1978-2003/Nov W05
        (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20031218,UT=20031211
        (c) 2003 WIPO/Univentio
? ds

```
Set     Items    Description
S1      303127   (IMAGE? OR HANDWRIT? OR HAND()WRIT?) AND (RECOGNI? OR IDEN-
                 TIF? OR DETERMIN? OR ANALY? OR PARSE OR PARSING OR TOKENI?)
S2      366992   (WORD? ? OR CHARACTER? ? OR ALPHANUMERIC? OR STRING? ?(5N)-
                 TEXT??? OR METASTROKE? ? OR STROKE? ?)
S3      288070   (RECOGNI? OR IDENTIF? OR DETERMIN? OR ANALY? OR PARSE OR P-
                 ARSING OR TOKENI?) AND S2
S4      327641   (PROTOTYPE OR REFERENCE OR MODEL OR STANDARD) AND S2
S5       82718   (MATCH? OR COMPAR? OR DIFFERENTIAT? OR CORRELAT? OR RELAT?-
                 )(5N)S3
S6      359141   (DICTIONAR? OR LEXICON? OR THESAUR? OR GLOSSAR? OR CATALOG?
                 OR LIST OR LISTS OR SELECTION?)
S7      305958   (CONFIDENCE OR SIMILAR? OR LIKELIHOOD OR LIKELINESS OR PRO-
                 BABILIT? OR CHANCE? ? OR RANK OR RANKING OR WEIGHT? OR THRESH-
                 OLD? ?) AND S2
S8       12490   (HOLISTIC? OR WHOLE OR SUM OR TOTAL?)(10N)S2
S9     1232286   (ANSWER? ? OR RESULT? OR OUTPUT? ? OR OUTCOME? ? OR PRODUC-
                 T)
S10    1291583   (SEGMENT? OR PART? ? OR PIECE? ? OR SECTION? ? OR TOKEN? ?)
S11         48   S1(S)S4(S)S5(S)S6(S)S7(S)S8(S)S9(S)S10
S12         48   IDPAT (sorted in duplicate/non-duplicate order)
S13         48   IDPAT (primary/non-duplicate records only)
S14         32   S13 NOT PD=20010216:20031218
S15         28   S14(15N)(S2(5N)S3)
S16          3   S15(15N)(IMAGE? OR HANDWRIT? OR HAND()WRIT?)(5N)(RECOGNI? -
                 OR IDENTIF? OR DETERMIN? OR ANALY? OR PARSE OR PARSING OR TOK-
                 ENI?)
S17         25   S15 NOT S16
S18         11   S17 NOT (CRYPTOGRAPHIC()ANALYSIS OR GROWTH()FACTOR()MUTANTS
                 OR LOW()LATENCY()NETWORKS OR SPEECH()RECOGNITION()SYSTEM? ? -
                 OR SIGN()LANGUAGE()LEARNING OR VIDEO()DECROMPRESSION OR VIDEO-
                 ()DECOMPRESSION)
```

16/3,K/1   (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00536350
System for checking the translation of a document.
System zur Prufung der Übersetzung eines Dokuments.
Systeme de verification de la traduction d'un document.
PATENT ASSIGNEE:
   THE BRITISH AND FOREIGN BIBLE SOCIETY, (1458170), Stonehill Green,
      Westlea, Swindon SN5 7DG, (GB), (applicant designated states:
      AT;BE;CH;DE;DK;ES;FR;GB;GR;IT;LI;LU;MC;NL;PT;SE)
INVENTOR:
   Robinson, David William Clough, 6 Hillside Mansions, Barnet Hill,
      Chipping Barnet, Hertfordshire EN5 5RH, (GB)
LEGAL REPRESENTATIVE:
   Newstead, Michael John et al (34354), Page Hargrave Temple Gate House
      Temple Gate, Bristol BS1 6PL, (GB)
PATENT (CC, No, Kind, Date):   EP 499366   A2   920819 (Basic)
                               EP 499366   A3   931020
APPLICATION (CC, No, Date):   EP 92300597 920123;
PRIORITY (CC, No, Date): GB 9103080 910214
DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IT; LI; LU; MC; NL;
   PT; SE
INTERNATIONAL PATENT CLASS: G06F-017/27; G06F-017/28;
ABSTRACT WORD COUNT: 72

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text   Language   Update   Word Count
      CLAIMS A   (English) EPABF1   417
      SPEC A   (English) EPABF1   8305
Total word count - document A   8722
Total word count - document B   0
Total word count - documents A + B   8722

   ...SPECIFICATION to that table, the row containing:
   - a serial number allotted to the present paring of **words** x* and (see
   image **reference** in original document) (stored in column 91);
   - the **word** x* (stored in column 92);
   - the **word** (see **image reference** in original document) (stored in
   column 93);
   - the **parsing** (i.e. the division into prefix, stem and suffix)
   currently assumed to apply to the **word** (see **image reference** in
   original document) (stored in column 94) (if Element 4 described below
   has not yet been processed then the word (see **image** reference in
   original document) will be assumed to have no prefix or suffix);
   - a list...

   ...target document on which occurrences of the word x* have been found to
   match the **word** x* (stored in column 96);
   - the **total** number of **matched** pairs of **words** x* and (see **image**
   reference in original document) (stored in column 97); and
   - a flag record indicating whether or not the **parsing** stored in column
   94 of the present row has been updated, currently set so as...which
   occurrences of the word x(sub(*)) have been found to match the word (see
   image reference in original document) (stored in column 95);
   - a lot of the segments in the...

...of the word (see image reference in original document) have been found
to match the **word** x(sub(*)) (stored in column 96);
- the **total** number of **matched** pairs of **words** x(sub(*)) and (see
image reference in original document) (stored in column 97);
- a flag record indicating whether or not the **parsing** stored in column
94 of the present row has been updated, currently set so as...

16/3,K/2   (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00260543
System for continuous speech recognition.
System zur kontinuierlichen Spracherkennung.
Systeme de reconnaissance de la parole continue.
PATENT ASSIGNEE:
  KABUSHIKI KAISHA TOSHIBA, (213130), 72, Horikawa-cho Saiwai-ku,
    Kawasaki-shi Kanagawa-ken 210, (JP), (applicant designated states:
    DE;FR;GB)
INVENTOR:
  Nitta, Tsuneo c/o Patent Division, Kabushiki Kaisha Toshiba 1-1 Shibaura
    1-chome, Minato-ku Tokyo 105, (JP)
  Uehara, Kensuke c/o Patent Division, Kabushiki Kaisha Toshiba 1-1
    Shibaura 1-chome, Minato-ku Tokyo 105, (JP)
  Watanabe, Sadakazu c/o Patent Division, Kabushiki Kaisha Toshiba 1-1
    Shibaura 1-chome, Minato-ku Tokyo 105, (JP)
LEGAL REPRESENTATIVE:
  Henkel, Feiler, Hanzel & Partner (100401), Mohlstrasse 37, W-8000 Munchen
    80, (DE)
PATENT (CC, No, Kind, Date): EP 265692 A1 880504 (Basic)
                             EP 265692 B1 920408
APPLICATION (CC, No, Date):   EP 87114236 870929;
PRIORITY (CC, No, Date): JP 86227961 860929
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G10L-005/06;
ABSTRACT WORD COUNT: 144

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1284
CLAIMS B	(German)	EPBBF1	603
CLAIMS B	(French)	EPBBF1	897
SPEC B	(English)	EPBBF1	6133
Total word count - document A			0
Total word count - document B			8917
Total word count - documents A + B			8917

...SPECIFICATION transition network memory 15 and for the input PS sequence
given as state before.
  In **the** example shown in Figs. 2A to 2D inclusive, PS sequence up to
the 5th place and labels Q, B, or F are input and processed for matchings
with transition networks **of** numeral **words** **including** "0, 1, ... 9 "
and of **words** **indicating** expression of four arithmetical **operations**
comprising "t(see image reference in original document)su (addition),
hiku (reduction), k(see image reference in original document)keru
(multiplication), w(see image reference in original document)ru
(division), and w(see **image** reference in original document) (sum)". In
this case, it is found that word sequence only...

00551327   **Image available**
APPARATUS AND METHOD·FOR PERSONALIZED LANGUAGE EXERCISE GENERATION
APPAREIL   ET   PROCEDE   DE   MISE   AU   POINT   D'EXERCICES   LINGUISTIQUES
    PERSONNALISES
Patent Applicant/Assignee:
  N V DE WILDE CBT,
Inventor(s):
  DE WILDE Christian,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200014700 A1 20000316 (WO 0014700)
  Application: WO 99US20379 19990903 (PCT/WO US9920379)
  Priority Application: US 9899245 19980904
Designated States: JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 10094 .

Fulltext Availability:
  Claims

Claim
... add, e.g. List of hints the student to find the student can make
  sound, **images** , a.w",
    Baseform in brackets the correct answer. a choice. address,
    Word class in brackets...

...pronoun muc Basic 1
  3 1 (Sinqle word) verb be Basic 1
  4 1 (Single **word**) verb be Basic 5
  5 1 (Single **word**) verb be Basic 6   .
  6 1 (Single **word**) **determiner** a Basic 1
  7 1 (Single **word**) **determiner** the Basic 1
  1 0 2(Fixed How do you Basic 1
  Expression) do ?
  20...
?

00883842
Hypertext document retrieving apparatus for retrieving hypertext documents relating to each other
Hypertext-Dokumentwiederauffindungssystem zum Wiederauffinden zusammengehor iger Hypertextdokumente
Systeme de recouvrement de documents hypertextes pour retrouver des documents hypertexte relies
PATENT ASSIGNEE:
  MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD., (216887), 1006, Oaza Kadoma, Kadoma-shi, Osaka-fu, (JP), (Applicant designated States: all)
INVENTOR:
  Ishikawa, Masato, 2-37-6, Horinouchi, Suginami-ku, Tokyo, (JP)
  Sato, Mitsuhiro, 2-27-1-A-201, Hashido, Seya-ku, Yokohama, (JP)
  Hoshida, Masaki, 6-10-9-101, Togoshi, Shinagawa-ku, Tokyo, (JP)
  Noguchi, Yoshihiro, 1-11-13-203, Fukuei, Ichikawa-shi, Chiba-ken, (JP)
  Yasukawa, Hideki, 3-5-8-101, Kichijoji, Kita-machi, Musashino-shi, Tokyo, (JP)
LEGAL REPRESENTATIVE:
  Schmidt, Christian et al (76643), Manitz, Finsterwald & Partner, Patent- und Rechtsanwalte, Robert-Koch-Strasse 1, 80538 Munchen, (DE)
PATENT (CC, No, Kind, Date): EP 809197 A2 971126 (Basic)
                              EP 809197 A3 010214
APPLICATION (CC, No, Date):   EP 97107823 970513;
PRIORITY (CC, No, Date): JP 96149783 960522
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06F-017/30
ABSTRACT WORD COUNT: 198
NOTE:
  Figure number on first page: 3

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	9711W3	2086
SPEC A	(English)	9711W3	14993
Total word count - document A			17079
Total word count - document B			0
Total word count - documents A + B			17079

...SPECIFICATION documents obtained in the retrieving unit 3, calculating an occurrence frequency TF of one particular **word** in one unified particular hypertext document for each particular **word** and each unified particular hypertext document, calculating an inverse document frequency IDF defined as an inverse value of the number of particular hypertext documents, in which one particular **word** appears, for each particular **word** , calculating a **product** TF*IDF of one occurrence frequency TF and one inverse document frequency IDF, summing a plurality of products for all particular **words** to produce a summed **product** as an estimated value for each particular hypertext document, **determining** a plurality of importance degrees of the ...particular hypertext document for each of the particular hypertext documents, selecting a plurality of high-**ranking** hypertext documents from the particular hypertext documents, extracting a plurality of related **words** listed in a plurality of **word lists** of **pieces** of hypertext document information of the hypertext document table corresponding to the high- **ranking** hypertext documents, calculating an occurrence frequency TF of one related **word** in one high-

ranking hypertext document for each related **word** and each high-
ranking hypertext document, calculating an inverse document frequency
IDF defined as an inverse value of the number of high- **ranking** hypertext
documents, in which one related word appears, for each related word,
calculating a sum...

...document in which a plurality of keyword selection buttons corresponding
to the high-ranking related **words** are arranged in the decreasing order
of the importance degrees of the high- **ranking** **related** **words** to
select one high- **ranking** **related** **word** by pushing one keyword
selection button, and
    a retrieval result displaying unit 93 for displaying the indexes of
the particular...high-ranking hypertext documents to produce a summed
product as an importance degree for each **related** word, comparing the
importance degrees of the related words with each other, selecting a
plurality...

...document in which a plurality of keyword selection buttons corresponding
to the high-ranking related **words** are arranged in the decreasing order
of the importance degrees of the high- **ranking** **related** **words** to
select one high- **ranking** **related** **word** by pushing one keyword
selection button, and
    a retrieval result displaying unit 103 for displaying the indexes of
the particular...

  18/3,K/2   (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00545743
Method for determining boundaries of words in text
Verfahren zur Bestimmung von Wortgrenzen im Text
Procede pour determiner les limites de mots dans un texte
PATENT ASSIGNEE:
  XEROX CORPORATION, (219783), Xerox Square, Rochester, New York 14644,
    (US), (applicant designated states: DE;FR;GB)
INVENTOR:
  Huttenlocher, Daniel P., 314 Comstock Road, Ithaca, New York 14850, (US)
  Wayner, Peter C., 116 Oak Avenue, Ithaca, New York 14850, (US)
  Hopcroft, Michael J., 10 Lowell Place, Ithaca, New York 14850, (US)
LEGAL REPRESENTATIVE:
  Pike, Christopher Gerard et al (80823), Rank Xerox Ltd., Patent
    Department, Parkway, Marlow, Buckinghamshire SL7 1YL, (GB)
PATENT (CC, No, Kind, Date): EP 543593 A2 930526 (Basic)
                              EP 543593 A3 940525
                              EP 543593 B1 980902
APPLICATION (CC, No, Date):   EP 92310422 921116;
PRIORITY (CC, No, Date): US 794392 911119
DESIGNATED STATES: DE; FR; GB
INTERNATIONAL PATENT CLASS: G06K-009/20;
ABSTRACT WORD COUNT: 68

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:
Available Text	Language	Update	Word Count
CLAIMS B	(English)	9836	814
CLAIMS B	(German)	9836	776
CLAIMS B	(French)	9836	932
SPEC B	(English)	9836	11477

Total word count - document A   0
Total word count - document B   13999
Total word count - documents A + B   13999

...SPECIFICATION then adding to it the warped difference from the bottom
  contour comparison, resulting in a **total** difference for the **word**
  shapes.
     By carrying out the **comparison** methods described in a " **piece** -wise"
  cascaded fashion, further processing benefits may also be derived. More
 specifically, cascaded comparison would...

 18/3,K/3   (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
(c) 2003 European Patent Office. All rts. reserv.

00306058
Digital data processing system.
Digitales Datenverarbeitungssystem.
Systeme de traitement de donnees numeriques.
PATENT ASSIGNEE:
  DATA GENERAL CORPORATION, (410940), Route 9, Westboro Massachusetts 01581
     , (US), (applicant designated states: AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)
INVENTOR:
  Bachman, Brett L., 214 W. Canton Street Suite 4, Boston Massachusetts
     02116, (US)
  Bernstein, David H., 41 Bay Colony Drive, Ashland Massachusetts 01721,
     (US)
  Bratt, Richard Glenn, 9 Brook Trail Road, Wayland Massachusetts 01778,
     (US)
  Clancy, Gerald F., 13069 Jaccaranda Center, Saratoga California 95070,
     (US)
  Gavrin, Edward S., Beaver Pond Road RFD 4, Lincoln Massachusetts 01773,
     (US)
  Gruner, Ronald Hans, 112 Dublin Wood Drive, Cary North Carolina 27514,
     (US)
  Jones, Thomas M. Jones, 300 Reade Road, Chapel Hill North Carolina 27514,
     (US)
  Katz, Lawrence H., 10943 S. Forest Ridge Road, Oregon City Oregon 97045,
     (US)
  Mundie, Craig James, 136 Castlewood Drive, Cary North Carolina, (US)
  Pilat, John F., 1308 Ravenhurst Drive, Raleigh North Carolina 27609, (US)
  Richmond, Michael S., Fearringtn Post Box 51, Pittsboro North Carolina
     27312, (US)
  Schleimer Stephen I., 1208 Ellen Place, Chapel Hill North Carolina 27514,
     (US)
  Wallach, Steven J., 12436 Green Meadow Lane, Saratoga California 95070,
     (US)
  Wallach, Walter, A., Jr., 1336 Medfield Road, Raleigh North Carolina
     27607, (US)
LEGAL REPRESENTATIVE:
  Robson, Aidan John et al (69471), Reddie & Grose 16 Theobalds Road,
     London WC1X 8PL, (GB)
PATENT (CC, No, Kind, Date):   EP 290111 A2   881109 (Basic)
                               EP 290111 A3   890503
                               EP 290111 B1   931222
APPLICATION (CC, No, Date):   EP 88200917 820521;
PRIORITY (CC, No, Date): US 266404 810522
DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE
RELATED PARENT NUMBER(S) - PN (AN):
  EP 67556 (EP 823025960)

INTERNATIONAL PATENT CLASS: G06F-009/30;
ABSTRACT WORD COUNT: 123

LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	1044
CLAIMS B	(German)	EPBBF1	890
CLAIMS B	(French)	EPBBF1	1185
SPEC B	(English)	EPBBF1	154314
Total word count - document A			0
Total word count - document B			157433
Total word count - documents A + B			157433

...SPECIFICATION Port 20910, the operating characteristics of JPO Port
  21010 will be described next.
  2. JPO **Port** 21010 Operating Characteristics (Fig. 210)
     Referring to Fig. 210, a diagramic representation of JPO Port...

  18/3,K/4   (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00243474
Word-organised, content-addressable memory.
Wortorganisierter, inhaltsadressierbarer Speicher.
Memoire adressable par contenu et organisee par mots.
PATENT ASSIGNEE:
  N.V. Philips' Gloeilampenfabrieken, (200769), Groenewoudseweg 1, NL-5621
    BA Eindhoven, (NL), (applicant designated states: DE;FR;GB;SE)
INVENTOR:
  Gubbels, Wilhelmus Christianus, Octrooibureau B.V. Prof. Holstlaan 6,
    NL-5656 AA Eindhoven, (NL)
  Van Zanten, Adrianus, Octrooibureau B.V. Prof. Holstlaan 6, NL-5656 AA
    Eindhoven, (NL)
LEGAL REPRESENTATIVE:
  Strijland, Wilfred et al , INTERNATIONAAL OCTROOIBUREAU B.V. Prof.
    Holstlaan 6, NL-5656 AA Eindhoven, (NL)
PATENT (CC, No, Kind, Date): EP 232949 A2 870819 (Basic)
                              EP 232949 A3 870930
APPLICATION (CC, No, Date):   EP 87200193 870209;
PRIORITY (CC, No, Date): NL 86342 860212
DESIGNATED STATES: DE; FR; GB; SE
INTERNATIONAL PATENT CLASS: G11C-015/00; G06F-012/06;
ABSTRACT WORD COUNT: 155

LANGUAGE (Publication,Procedural,Application): English; English; Dutch
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	1529
SPEC A	(English)	EPABF1	6748
Total word count - document A			8277
Total word count - document B			0
Total word count - documents A + B			8277

...CLAIMS after the last local cut-off signal being placed on the second
      signalling line.
    3. **Word** -organised, content-addressable memory provided with a series
      of integrated memory circuits, which define **word** locations with
      corresponding **word** location circuits comparable with masked

keywords, and with a separate integrated control circuit for
supplying...

...memory circuit, in order to receive correspondence signals obtained from
the memory circuits comprising the **word** location **sections** by
comparison with masked keywords for each **word** location, and
thereupon to supply selection signals to the above-mentioned memory
circuits, which indicate the **word** locations, the content of which
is subjected to operations **determined** by specific code signals,
account being taken of a particular sequence of handling these
operations in the event of correspondence signals being received from
several **word** locations, characterised in that the control circuit
is provided with a first logic tree structure...

...i = 1, 2, ..., n) are supplied, which correspond to the correspondence
signals obtained for each **word** location **section** from a group of n
word location **sections** , and of which the **output** signal can be
represented in Boolean form by (see **image** in original document) and
indicates that at least one of the **word** location **sections** from
the group of n **word** location **sections** corresponds to the masked
keyword supplied, and a second logic tree structure to which the...

...logic tree structure, as well an input signal (P), which indicates that
at least one **word** location **section** preceding the group of n **word**
location **sections** in the memory corresponds to the masked keyword
supplied, and of which the **output** signal can be represented in
Boolean form by (see **image** in original document) and indicates that
at least two **word** location **sections** from the **total** **word**
location **sections** then investigated correspond to the masked
keyword supplied.
4. **Word** -organised, content-addressable memory in accordance with
claim 3, characterised in that the successive input...

18/3,K/5   (Item 5 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS
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00239708
Optical character recognition apparatus.
Vorrichtung fur optische Zeichenerkennung.
Dispositif de reconnaissance optique de caracteres.
PATENT ASSIGNEE:
  NEC CORPORATION, (236690), 7-1, Shiba 5-chome Minato-ku, Tokyo 108-01,
    (JP), (applicant designated states: BE;DE;FR;NL)
INVENTOR:
  Umeda, Tetsuo c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku Tokyo
    108-01, (JP)
  Kasuya, Shigenobu c/o NEC Corporation, 7-1, Shiba 5-chome, Minato-ku
    Tokyo 108-01, (JP)
LEGAL REPRESENTATIVE:
  Vossius & Partner (100311), Siebertstrasse 4 P.O. Box 86 07 67, W-8000
    Munchen 86, (DE)
PATENT (CC, No, Kind, Date): EP 238027 A2 870923 (Basic)
                              EP 238027 A3 900822
                              EP 238027 B1 930714
APPLICATION (CC, No, Date):   EP 87103812 870316;
PRIORITY (CC, No, Date): JP 8658585 860317
DESIGNATED STATES: BE; DE; FR; NL
INTERNATIONAL PATENT CLASS: G06K-009/38;

...CLAIMS sub 3)', B(sub 4)') each having a different quantization
       characteristic, each binary signal representing **said** prescribed
       scanning **area** consisting of a plurality of pixels arranged to form
       a matrix, a black pixel indicating a **part** of said **character** and a
       white pixel indicating a background **part** ;
           black pixel number counting means (7) for counting the number of
       black pixels contained in...
...N(sub 1)) totally surrounded by black pixels or a black pixel (N(sub 2))
       totally surrounded by white pixels and said isolated pixel
       number corresponds to a noise pixel number.
    2. An...

...of said scanner means (1) into a digital signal, said digital signal
       being constructed by **a** first plurality (**n**) of bits; and
           means (17) for producing said plurality of binary signals (B(sub
       1...

...said scanning means for producing a plurality of binary signals (B1",
       B2") from said scanned **signal** , said plurality **of** binary signals
       (B(sub 1)", B(sub 2)") being binary-coded under respective different
       quantization...

...of a plurality of pixels arranged in a matrix form, a black pixel
       indicating a **part** of said **character and** a **white** pixel
       indicating a background part;
           black pixel number counting means (7) for counting the number of
       black pixels contained in each binary signal and for outputting a
       black **pixel** number (e(sub 1)) for each binary signal;
           isolated pixel number counting means (9) for...
...sub 1)) and said corresponding isolated pixel number (f(sub 1)) for each
       binary signal; **and**
           comparison means (**27**) for **determining** an optimum binary
       signal from said plurality of binary **signals** (B(**sub** 1)", B(sub
       2)") on the basis of comparison of the ratios calculated by said...

...isolated pixel number corresponds to a noise pixel number, and that said
       apparatus further comprises
           recognition means (28, 29) for **recognizing** said **character**
       on said mail article on the basis of said plurality of binary
       signals (B1", B2") to...

...said digital signal, each binary signal being quantized to include a
       plurality of meshes arranged **to** form a matrix corresponding to said
       predetermined scanning area;
           means for counting black meshes each showing a part of **a**
       character contained in **said** predetermined scanning area with
       respect to said **plurality** of **binary signals** to deliver a

plurality of black **mesh** **numbers** corresponding to said plurality of binary signals, respectively;
means for counting insulated meshes contained in...and a white mesh surrounded by black meshes, said white mesh showing other than said **part** of said **character** ;
means for calculating a plurality of ratios between said plurality of black mesh numbers and...

...select one binary.signal from said plurality of binary signals in accordance with the comparison **result** ; and
means for **recognizing** said **character** contained in said predetermined scanning area in response to said one binary signal delivered from...

18/3,K/6 **(Item 1 from file: 349)**
DIALOG(R)File 349:PCT FULLTEXT
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00769517 **Image available**
VISUALIZATION METHOD AND VISUALIZATION SYSTEM
PROCEDE ET SYSTEME DE VISUALISATION
Patent Applicant/Assignee:
  BAYES INFORMATION TECHNOLOGY LTD, Lepolantie 27 as. 6, FIN-00660 Helsinki
    , FI, FI (Residence), FI (Nationality), (For all designated states
    except: US)
Patent Applicant/Inventor:
  KONTKANEN Petri Tapani, Eerikinkatu 48 D 83, FIN-00180 Helsinki, FI, FI
    (Residence), FI (Nationality), (Designated only for: US)
  LAHTINEN Jussi Mika Antero, Vaasankatu 25 C 77, FIN-00500 Helsinki, FI,
    FI (Residence), FI (Nationality), (Designated only for: US)
  MYLLYMAKI Petri Jukka, Kartanonkaari 31 D, FIN-00410 Helsinki, FI, FI
    (Residence), FI (Nationality), (Designated only for: US)
  SILANDER Tomi Viljam, Kuparitie 14-16 E 65, FIN-00440 Helsinki, FI, FI
    (Residence), FI (Nationality), (Designated only for: US)
  TIRRI Henry Rainer, Laivastokatu 8-10 C 32, FIN-00160 Helsinki, FI, FI
    (Residence), FI (Nationality), (Designated only for: US)
  VALTONEN Kimmo Antero, Matkamiehentie 6 A 46, FIN-00320 Helsinki, FI, FI
    (Residence), FI (Nationality), (Designated only for: US)
Legal Representative:
  BERGGREN OY AB, P.O. Box 16, FIN-00101 Helsinki, FI
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200103053 A1 20010111 (WO 0103053)
  Application: WO 2000FI603 20000630 (PCT/WO FI0000603)
  Priority Application: FI 991490 19990630
Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
  DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
  LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
  SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
  (EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
  (OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
  (AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
  (EA) AM AZ BY KG KZ MD RU TJ TM
Publication Language: English
Filing Language: English
Fulltext Word Count: 7987

Fulltext Availability:
  Claims

Claim

... close two data vectors- are to each other. In a method according to
the invention, **similarity** of data vectors (or, in other **words** ,
distance between data vectors) is not defined directly using the values
of the components of...

...between the first and the second data vector in the domain space depends
on the **similarity** of the first and second instances of the predictive
distribution, in other **words** it depends on the distance between the
first and second instances of the predictive distribution...the present
invention.
DETAILED DESCRIPTION
In the follow' description letter M refers to a probabilistic **model** ,
which
mg
associates with each point of the data domain a certain **probability** . In
other **words** , the **model** M **relates** to a **probability** distribution
P(X,,..., Xj M) on the space of possible data vectors x, where a...part
of the data to be visualized as a training set and still use the **whole**
data in the visualization process. In other **words** , it is possible that
the training set is a subset of the data to be...and MAP assignment for
the target attribute X, is the value Xlk having the highest **probability**
. In other **words** , P(MAP(xi)=NIAP(xj)) is the **probability** that the
values of the target attributes in data vector xi are the same as...
...computational problems with practical implementations. Preferably, the
visualization vectors are found Equation 2, in other **word** using the
Sammon's mapping. It is also possible to use a predictive distribution to
...accepts the change if the value of criterion in Equation 2 is
decreased. In other **words** , one visualization vector is changed at time.
The new candidate visual vector are generated from...

18/3,K/7   (Item 2 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00579216   **Image available**
APPARATUS AND METHOD FOR PERSONALIZED LANGUAGE EXERCISE GENERATION
SYSTEME ET PROCEDE DE GENERATION D'EXERCICES DE LANGUE PERSONNALISES
Patent Applicant/Assignee:
  N V DE WILDE CBT,
Inventor(s):
  DE WILDE Christian,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200042589 A2 20000720 (WO 0042589)
  Application: WO 99IB2126 19990903   (PCT/WO IB9902126)
  Priority Application: US 9899245 19980904
Designated States: JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
Publication Language: English
Fulltext Word Count: 9269

Fulltext Availability:
  Claims

Claim
... E.G, VOICING, ROUNDING,
  GENERAL SPECIFIC NASALITY, PLOSION)
  NOTIONS
  C. PHONETIC COMPOSITION
  INTERLEXICAL RELATIONS: OF **WORDS**   (SYLLABLE
  -SYNONYMY/ANTONYMY STRUCTURE, THE SEQUENCE

-HYPONYMY OF PHONEMES, **WORD**
-COLLOCATION STRESS, **WORD** TONES)
- **PART - WHOLE**
 RELATIONS D. SENTENCE PHONETICS
-COMPONENTIAL (PROSODY)
 ANALYSIS - SENTENCE STRESS
- TRANSLATION AND RHYTHM
EQUIVALENCE - INTONATION
B. GRAMMATICAL SEMANTICS E PHONETIC REDUCTION
DEALS WITH...

...ENTAILMENT,
 PRESUPPOSITION,
 IMPLICATURE, ...
 FIG, 313
 SUBSTITUTE SHEET (RULE 26)
 USER'S PREFERENCES 40
 GLOBAL 42 **WORD** SPECIFIC 44
 A TEACHER CAN SET THE HINTS 46 ALTERNATIVES 47
 FOLLOWING PARAMETERS:
 o NO...

...STUDENT E.G.
 e BASEFORM IN BRACKETS
 STUDENT TO CAN MAKE A CHOICE. WW
 o **WORD** CLASS IN BRACKETS
 o URL FIND THE
 o EVALUATION PER GAP CORRECT
 9 EVALUATION PER...

...26)
 ENTRY TYPE TYPE VALUE1 VALUE2 LEV
 NUMBER
 72 73 74 75 76
 1 (SINGLE **WORD**) NOUN DIFFICULT' BASI(
 I (SINGLE **WORD**) PRONOUN MUCH BASI(
 I (SINGLE **WORD**) VERB BE BASI(
 I (SINGLE **WORD**) VERB BE BASI(
 1 (SINGLE **WORD**) VERB BE BASI(
 1 (SINGLE **WORD**) **DETERMINER** A BASI(
 1 (SINGLE **WORD**) --[T=TERMINER THE -B-A-ST(
 2(FIXED HOW DO YOU BASI(
 EXPRESSION) DO?
 3...

...G-Et @WOR@D BA.IC
 SINGLE)@RD VE t7B@@ LA @@@H@ ASIC
 j SINSLE **WORD** VERB ICK -6A-S -RC@@
 -SINGLE **WORD** VERB BASIC
 .-SINGLE **WORD** VERB CAN B IC
 SINGLE W 5R@D VERB ABANDON HRESHOLD
 SINGE@EWbRD VERB T...

 18/3,K/8   (Item 3 from file: 349)
 DIALOG(R)File 349:PCT FULLTEXT

 00549708   **Image available**
 MULTISCRIPT DATABASE SYSTEM AND METHOD

BASE DE DONNEES A SCRIPTS MULTIPLES ET PROCEDE CORRESPONDANT
Patent Applicant/Assignee:
  BASIS TECHNOLOGY CORPORATION,
Inventor(s):
  BENSON Margulies I,
  HOFFMAN Carl W,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200013081 A2 20000309 (WO 0013081)
  Application: ·   WO 99US19749 19990831 (PCT/WO US9919749)
  Priority Application: US 9898422 19980831
Designated States: CA CN IL JP AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC
  NL PT SE
Publication Language: English
Fulltext Word Count: 16319

Fulltext Availability:
  Claims

Claim
...   99.8 99's
  Note: Asterisks indicate combinations of test variables that did Worse
  than **similar** combinations using shorter profiles. statistics for 100,
  200, 300 or 400 N-grams. This **words** , for these cases, using more
  N-grarn variable did have an impact on match perfor...happen on occasion,
  and some of those are present in our samples. based profiling with **whole**
  - **word** -based profiling Also, it is entirely possible for articles to be
  truly in the near...

...Another related idea is that by using N-gram advanced Al techniques for
  detecting hacker **analysis** , we get **word** stemming essentially for
  intrusion patterns could appear in alt.security. free. The N-grams for
  related forms of a **word** Such an article might **match** strongly to two
  (e.g., 'advance'. 'advanced', 'advancing', groups simultaneously.
  'advancement'. etc.) automatically have a lot in
  cornman when viewed as sets of N-grams. To get
  equivalent **results** with **whole** **words** , the system
  6.0 Advantages of the N=Gram would have to perform **word** stemming, which
  Frequency Technique would require that the system have detailed
  knowledge about the particular...

...and The N-gram frequency method provides an ine'xfaxes, as well as
  preprocessing and **character** rec- pensive and highly effective way of
  classifying ognition differences. Our N-gram-based scheme...

...to use a complicated and costly methods such as natural very fast but
  low quality **character** **recognition** language **parsing** or assembling
  detadled leximodule for **similarity** **analysis** . cons. Essentially this
  approach defines a "catego
  rization by example" method. Collecting
  It is possible that one could achieve **similar** samples and building
  profiles can even be hanresults using whole word statistics. Tn this dled
  ...

...occurrence tem becomes much more sensitive to OCR of a word. problcms-a
  single misrecognized **character** Although the existing system already has
  throws off the statistics for a **whole** **word** . A sec- demonstrated good
  performance, there is considond possible difficulty is that short
  passages erable...

...for further work:

(such as Usenet articles) are simply too short to
get representative subject **word** statistics. By def- Currently the
system uses a number of difWtioD, there are simply more...
...grarns in a given ferent N-grams, some of which ultimately passage than
there are **words** , and there are con- are more dependent on the language
of the sequently greater opportunities to collect enough document than
the **words** comprising its N-grams to be significant for matching. We
hope content. By ornitting the...

18/3,K/9   (Item 4 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00459165   **Image available**
UNIVERSAL EPISTEMOLOGICAL MACHINE (A.K.A. ANDROID)
MACHINE EPISTEMOLOGIQUE UNIVERSELLE (ANDROIDE A.K.A.)
Patent Applicant/Assignee:
  DATIG William E,
Inventor(s):
  DATIG William E,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9849629 A1 19981105
  Application: WO 98US8527 19980427 (PCT/WO US9808527)
  Priority Application: US 97847230 19970501; US 97876378 19970616; US
    9833676 19980303
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
  FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD
  MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US
  UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE
  CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN
  ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 265553
Fulltext Availability:
  Claims

Claim
...   androidalfaculties of mind, modes of existence, and moments of
  non-real and real form, wherein **whole** compositions of enabled form
  transform as modal compositions of the plurality of the enabled universe.
  The **determination** of a composition is arbitrary on the **part** of the
  enabler and is what constitutes the enablement of the android's composing
  of form itself-the use of language and the perceptive experience of
  reality on the **part** of the enabled being. The reason why, in a
  particular mode of thinking, one may express a single **word** , and in
  another, a lengthy sentence or a **whole** composition of literary style,
  is decided by the modal forms of composition in relation to...

18/3,K/10   (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00376923
STRUCTURED FOCUSED HYPERTEXT DATA STRUCTURE
STRUCTURE DE DONNEES HYPERTEXTE ARTICULEE SUR LA STRUCTURATION
Patent Applicant/Assignee:
  HYPERMED LTD,
  OREN Avraham,

OLCHA Lev,
KOWALSKI Nahum,
MARGULYAN Rita,
Inventor(s):
  OREN Avraham,
  OLCHA Lev,
  KOWALSKI Nahum,
  MARGULYAN Rita,

Fulltext Availability:
  Detailed Description

Detailed Description
...   SHEET (RULE 26)
  If QuerlyMode Then Sub Index ListPages (IsASynonvm As
  location Integer, ChapterName As   **String** ,
  TrackQueriedListOfChapters(1) sPageSearchString As String)
  Else
  location If WasAnIndexMatch Then
  PositionInIndexedList 'do nothing
  End If...Ws of the pages SortAndDisplavindexPageNames
  ReDim SortSNames(I To IO) As SortSNameso, 1, i, "ab"
   String ' for sorting the names of the I
  pages I now can show the user how...

...On Error GoTo 0
  End If End If
  DoEvents
  now need to "search" in this   **list**   of
  frmSelect.ProgressSubchapters.Visible
  pages False
  Dim PageName As **String**
  If sPageSearchString <> "" Then End Sub
  For j = I To
  fnnSelect.IndexedSubchapterList. **List**   Sub IntemaiResetOflndexRequest (s
  Count As String)
  PageNarne = I
  frmSelect.IndexedSubchapterList. **List** ('this routine will allow an
  internal   ·
  modification of the Index request   ⌐
  If LCaseS(sPageSearchStn'ng...

...For IntemalResetOflndexRequestActive =
  End If True
  Next j frmSelect.Textl.Text = s
  ifj = IntemaiResetOflndexRequestActive =
  frmSelect.IndexedSubchapterList. **List**   False
  Count + I Then I·
  I End Sub
  End If

```
Else Sub OnTextChange
j = I...problem
appropriare entry in the Table Else
of chapters tbITableOfChapters.Edit
tblTableOfChapters(`Type of
Dim  Result  As Integer Chapter") = CStr(ChapterTypes)
Dim ChapterTypes As Integer tbITableOfChapters-Update
Dim k 1, k2, k3, k4, k5, k6 End If
t  Result
kl SetlndexTypeChapter(ChapNum.

Abs(SpecifvChapterType.Cheek I.Valu ChapterTypes)
e) 1* (2 A 0)
k2...

...Check3.Valu Dim StartAt As Long, StopAt As Long
e) * 4'* (2 A 2) Dim  Words ( As String, NumWords
k4 = As Integer
Abs(SpecifvChapterType.Check4.Valu Dim s As String, sc...keywords reached
a legitimate termination point
I now we must I now rebuild
get the  words  for which we must find a phrase into a single  string
and use
the synonyms ' ...I Then
we
blank- out the statement CountSvn
Vords 0
basicaliv we cut out the  word  SN,nPhrase(O) = "C'
SYNONYMS of and we leave Do Until
' the r > SynFoundCount
subject of the request
I SynonymList(r)
PLEASE NOTE: the  result  of this
search will be 0 GetWordsOfTitle 1, w(, n
StoreWord(OriginalSynElemL add
oc) the  word  (s) of the synonym
For p = I Dim
To OriginalSynElemCount - 2 in As Integer
For...single
IsOperator(StoreWord(i - 1)) Then operation on the data lists
I we have two  words  in I starting from Loc I and Loc2. The
a row  result  will be deposited in the
For j = NumGetWords ' data array starting from Loc 1. Note...
```

 18/3,K/11   (Item 6 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
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00153060
PARALLEL MACHINE ARCHITECTURE FOR PRODUCTION RULE SYSTEMS
ARCHITECTURE DE MACHINE PARALLELE POUR DES SYSTEMES DE REGLES DE PRODUCTION
Patent Applicant/Assignee:
  MARTIN MARIETTA ENERGY SYSTEMS INC,
Inventor(s):
  ALLEN John Daniel Jr,
  BUTLER Philip Lee,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 8809972 A1 19881215
  Application: WO 88US1901 19880609 (PCT/WO US8801901)

Fulltext Availability:
  Detailed Description

Detailed Description
...   technique is used extensively in the parser. One
    important point is that atoms with reserved **characters** may
    be next to each other without any spaces in between. The
    state machine approach allows only the correct **characters**
    to be picked up, leaving remaining characters for the next
    atom.

    When the host reads...if any) shoul
    after the code an Line 10 and before
    Line 15 is the **product** release date. Pli
    IJQ ve g n
    0 WNCHMS PLBOU03/86)
    SS START41HER
    EE *EWTIME...

```
File 344:Chinese Patents Abs Aug 1985-2003/Nov
        (c) 2003 European Patent Office
File 347:JAPIO Oct 1976-2003/Aug(Updated 031202)
        (c) 2003 JPO & JAPIO
File 348:EUROPEAN PATENTS 1978-2003/Nov W05
        (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20031211,UT=20031204
        (c) 2003 WIPO/Univentio
File 350:Derwent WPIX 1963-2003/UD,UM &UP=200381
        (c) 2003  Thomson Derwent
?.ds

Set      Items     Description
S1         323     AU=(FILATOV, A? OR FILATOV A?)
S2          17     AU=(KIL I? OR KIL, I?)
S3          87     AU=(SEREGIN, A? OR SEREGIN A?)
S4           2     CO=PARASCRIPT
S5           6     (S1 OR S2 OR S3 OR S4) AND IC=G06K-009/72
S6           6     IDPAT (sorted in duplicate/non-duplicate order)
S7           3     IDPAT (primary/non-duplicate records only)
S8      456029     (IMAGE? OR HANDWRIT? OR HAND()WRIT?) AND (RECOGNI? OR IDEN-
                 . TIF? OR DETERMIN? OR ANALY? OR PARSE OR PARSING OR TOKENI?)
S9           0     (S1 OR S2 OR S3 OR S4) AND S7 NOT S6
```

```
7/3,K/1      (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX
(c) 2003  Thomson Derwent. All rts. reserv.

015649888     **Image available**
WPI Acc No: 2003-712071/200367
XRPX Acc No: N03-569614
   Check processing method, involves linking handwritten text to matched
   information entry if information entry matches text, linking act
   designates matched information entry as interpretation for handwritten
   text
Patent Assignee: PARASCRIPT LLC (PARA-N)
Inventor: FILATOV A
Number of Countries: 102  Number of Patents: 002
Patent Family:
Patent No       Kind   Date      Applicat No    Kind    Date      Week
US 20030177100  A1     20030918  US 200293184    A      20020306  200367  B
WO 200377190    A1     20030918  WO 2003US6575    A      20030305  200371

Priority Applications (No Type Date): US 200293184 A 20020306
Patent Details:
Patent No  Kind Lan Pg   Main IPC     Filing Notes
US 20030177100 A1      21 G06F-017/60
WO 200377190  A1 E      G06K-009/72
   Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA
   CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN
   IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ
   OM PH PL PT RO RU SC SD SE SG SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU
   ZA ZM ZW
   Designated States (Regional): AT BE BG CH CY CZ DE DK EA EE ES FI FR GB
   GH GM GR HU IE IT KE LS LU MC MW MZ NL OA PT RO SD SE SI SK SL SZ TR TZ
   UG ZM ZW

Inventor: FILATOV A
...International Patent Class (Main): G06K-009/72


7/3,K/2      (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX
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014885676     **Image available**
WPI Acc No: 2002-706382/200276
XRPX Acc No: N02-556948
   Handwritten character recognition apparatus used in computer system for
   commercial applications, generates holistic and analytic answer list
   using character string recognized in image and string segmentation list
Patent Assignee: PARASCRIPT LLC (PARA-N); FILATOV A (FILA-I); KIL I
   (KILI-I); SEREGIN A (SERE-I)
Inventor: FILATOV A ;  KIL I ;  SEREGIN A
Number of Countries: 098  Number of Patents: 003
Patent Family:
Patent No       Kind   Date      Applicat No    Kind    Date      Week
US 20020114523  A1     20020822  US 2001788032   A      20010216  200276  B
WO 200267189    A2     20020829  WO 2002US53      A      20020103  200276
EP 1362322      A2     20031119  EP 2002720749    A      20020103  200377
                                 WO 2002US53      A      20020103

Priority Applications (No Type Date): US 2001788032 A 20010216
```

Patent Details:
Patent No   Kind Lan Pg   Main IPC   Filing Notes
US 20020114523 A1   15 G06K-009/72
WO 200267189   A2 E   G06K-009/68
    Designated States (National): AE AG AL AM AU AZ BA BB BG BR BY BZ CA CH
    CN CO CR CU DM DZ EC ES GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
    KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU
    SD SE SG SI SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
    Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR
    IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW
EP 1362322   A2 E   G06K-009/68   Based on patent WO 200267189
    Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT
    LI LT LU LV MC MK NL PT RO SE SI TR

Inventor: **FILATOV A ...**

... KIL I ...

... SEREGIN A
...International Patent Class (Main): **G06K-009/72**

 7/3,K/3   **(Item 3 from file: 348)**
DIALOG(R)File 348:EUROPEAN PATENTS
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01656480
EXTRACTING TEXT WRITTEN ON A CHECK
EXTRACTION DE TEXTE ECRIT SUR UN CHEQUE
PATENT ASSIGNEE:
    Parascript LLC, (4198720), 7105 La Vista Place, Niwot, CO 80503, (US),
       (Applicant designated States: all)
INVENTOR:
    FILATOV, Alexander , 2101 Amethyst Drive, Longmont, CO 80504, (US
PATENT (CC, No, Kind, Date):
                               WO 2003077190 030918
APPLICATION (CC, No, Date):   EP 2003744169 030305; WO 2003US6575 030305
PRIORITY (CC, No, Date): US 93184 020306
DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR;
   HU; IE; IT; LI; LU; MC; NL
EXTENDED DESIGNATED STATES: AL; LT; LV; MK
INTERNATIONAL PATENT CLASS: **G06K-009/72** ; G06K-009/20
.LANGUAGE (Publication,Procedural,Application): English; English; English

INVENTOR:
    FILATOV, Alexander ...
INTERNATIONAL PATENT CLASS: **G06K-009/72** ...
?